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PART I, NUMBER 2

THE LOWER EUPHRATES-TIGRIS REGION

BY

FORMERLY CURATOR OF PHYSICAL ANTHROPOLOGY



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PREFACE

On April 1, 1934, the Field Museum Anthropological Expedition to the Near East, under my leadership, and financed by Mr. Marshall Field, began work in Baghdad. The first four and one-half months of the anthropometric survey were spent in Iraq. In addition, botanical, geological, and zoological specimens were collected. Anthropometric data were also obtained in Iran (Field, 1939) and among the North Osetes and Yezidis of the Caucasus, U.S.S.R.

Mr. Richard Martin, formerly Curator of Near Eastern Archaeology at Field Museum, was in charge of collecting zoological specimens and also accompanied me throughout the Expedition in the capacity of photographer.

Lady Drower ("E. S. Stevens"), the author of the "Folktales of Iraq" and other books, accompanied the Expedition to the Hor al Hawiza in order to record notes on the life and customs of the Al bu Muhammad tribesmen. Lady Drower, who has lived for many years in Iraq, is an accomplished linguist both in Arabic and in Mandaean. The results obtained during part of April, 1934, are recorded by her in Chapter V.

Miss Winifred Smeaton, now Mrs. Homer Thomas, was refused permission by Sheikh Falih as Saihud to measure any of the Al bu Muhammad women. Miss Smeaton, therefore, assisted Lady Drower and at the same time compiled extensive notes on tattooing and its significance among these marsh-dwellers.

Mr. Khedoory Muallim, whose services were lent to the Expedition by Dr. J. Sinderson of the Royal College of Medicine in Baghdad, collected birds in the marshes of the Chahala district.

Mr. Albert Meymourian, entomologist of the Rustam Agricultural Experimental Farm at Hinaidi near Baghdad, collected insects in the marshes east of Amara.

Mr. S. Y. Showket, of Basra, acted in the valuable capacity of interpreter. His knowledge of English, Arabic, Kurdish, Persian, and Chaldean, combined with his instinctive finesse in dealing with recalcitrant subjects, made him an invaluable member of the Expedition. Some of the photographs were taken by him.

Mr. Yusuf Lazar, an Assyrian, was in charge of collecting herbarium specimens and insects.

Our special gratitude must be recorded to our gracious host, Sheikh Falih as Saihud (Pl. 49), Paramount Sheikh of the great

Al bu Muhammad tribe. Sheikh Khazal ibn Falih (Pl. 72) guided and escorted us for two weeks in the Hor al Hawiza.

Our letters of introduction from the Minister of the Interior to the *Mutasarrif* and Chief of Police of the Amara *Liwa* literally opened the road into the Hor al Hawiza. Their genuine interest in our work was an important factor in our success. Ten Amara policemen were assigned to the Expedition by the *Mutasarrif*, since few foreigners have ever been propelled in a boat (*mashhuf*) within the confines of this great marsh. Each member of the Expedition was ordered to take at least one police officer in uniform whenever he left camp within the marshes. The Chief of Police in Amara stated that the physical characters of the Al bu Muhammad and the Al Sawaad were different. Consequently, we visited Halfaya in order to obtain a series of fifty Al Sawaad tribesmen. We were assisted most ably by the Chief of Police in Halfaya.

Since full acknowledgments of assistance have been given in Part I, No. 1, I shall not repeat them here.

I wish to thank Miss Elizabeth Reniff, my former research assistant, who worked on this report both at Field Museum and at Harvard.

The typing was done by Miss Ethel Brady, who arranged the statistical tables, and by Mr. Theodore Scully, who typed the remainder of the manuscript and assisted with the final checking of the report. He also calculated some of the tables.

I also gratefully acknowledge the aid of Miss Lillian A. Ross, Associate Editor of Scientific Publications, in seeing the manuscript through the press.

My wife has generously assisted in the proofreading.

Mr. Richard A. Martin drew the sketch map of the route taken by members of the Expedition east and southeast of Amara. In addition he made text figures 12-14, based on personal observation and measurements of the largest Al bu Muhammad council house.

The general map of the Lower Tigris-Euphrates region (p. 236) was drawn by Mr. Peter Gerhard, a volunteer assistant, who checked some of the place names in the text.

Grateful acknowledgment must be made to Lady Drower for the photographs that have been used in the following plates: Pls. 52, 54, 62 (Fig. 2), 64, 65-68, 69 (Fig. 1), 70 (Fig. 2), 74, and 76.

Plates 218-224 are from photographs by Mr. V. H. W. Dowson and Plate 228 is from the British Museum.

The place names conform to the spelling adopted by the Permanent Committee on Geographical Names of the Royal Geographical Society in London. As the question of orthography is by no means settled and many names are not yet included in the published lists of the Society, standard practice as adopted by the most recent British map-makers has been used.

For the sake of ocular euphony, throughout this report the English article has been inserted in front of tribal names such as *the* Al bu Muhammad, although this is technically incorrect. Similarly, the plurals of many Arabic words have been anglicized by adding the letter *s* to the singular form, i.e., *mashufs* instead of *mashahuf*.

Except in Chapter V (pp. 368-406) all diacritical marks have been omitted because the Arabic words and the names of tribal Sections and Sub-sections were recorded only as phonetic transliterations. Lady Drower, however, made a special effort to record accurate transliterations of Arabic terms in use among the Al bu Muhammad tribesmen. For this reason in Chapter V the majority of the diacritical marks have been retained.

This manuscript was completed during 1941, but publication was delayed by World War II. A few recent references have been added to the Bibliography.

HENRY FIELD



MAP 1. Lower Euphrates-Tigris region.

THE ANTHROPOLOGY OF IRAQ

PART I, NUMBER 2

THE LOWER EUPHRATES-TIGRIS REGION

I. INTRODUCTION

This report, based on the anthropometric data obtained in April, 1934, is concerned with the physical characters of the peoples of the Lower Euphrates-Tigris region of Iraq.

Chapter II deals briefly with the boundaries, physical geography, climate, flora, fauna, and recent historical outline of this area.

In Chapter III are included the anthropometric data on the Al bu Muhammad, Al Sawaad, and Subba, together with some notes on the Bani Lam.

Lady Drower (*née* E. S. Stevens), whose able contribution on the Marsh Arabs appears in Chapter V, has resided in Baghdad for nearly twenty years. She has devoted the major part of her efforts toward a study of the Mandeans or Subba, the famous silver-workers of Iraq.

In 1934, I invited Lady Drower to accompany the Expedition to the marshes lying east and southeast of Amara, an area known as the Hor al Hawiza. Lady Drower's special assignment was to collect information on the Al bu Muhammad Marsh Arabs and to record their Arabic words and phrases, particularly those that differed from those in general use in central and northern Iraq.

Chapter IV deals with the anthropometric data on 125 men and 40 women obtained during March, 1935, in the Royal Hospital at An Nasiriya by Dr. Winifred Smeaton. These data form a most welcome addition because they are the only figures available for this area of southern Iraq.

The Appendix contains notes on the date palm (*Phoenix dactylifera*) by Mr. V. H. W. Dowson.

Reports on the Hemiptera and Orthoptera have already been published by the Museum (see China, 1938, and Uvarov, 1938).

Indexes of the individual numbers and plate numbers of the Al bu Muhammad, Al Sawaad, and Subba males and females have been prepared for the convenience of the reader.

II. THE LAND AND THE PEOPLE¹

Boundaries.—This region is divided into three parts: the Lower Euphrates, the northern Tigris (from Al Qurna northward), and the southern Tigris (from Al Qurna to Failiya).

The northern and western boundaries of this area run from Bagh-i-Shahi, on the Iranian-Iraq frontier, in a straight line to three miles south of Kut al Hai, crossing the Tigris at Sheikh Saad. Formerly the Shatt al Gharraf joined the Euphrates at An Nasiriya, but the southern portion of this channel silted up and the natural line of flow developed from three miles north of Shatra in a southeasterly direction along the Shatt al Bada.

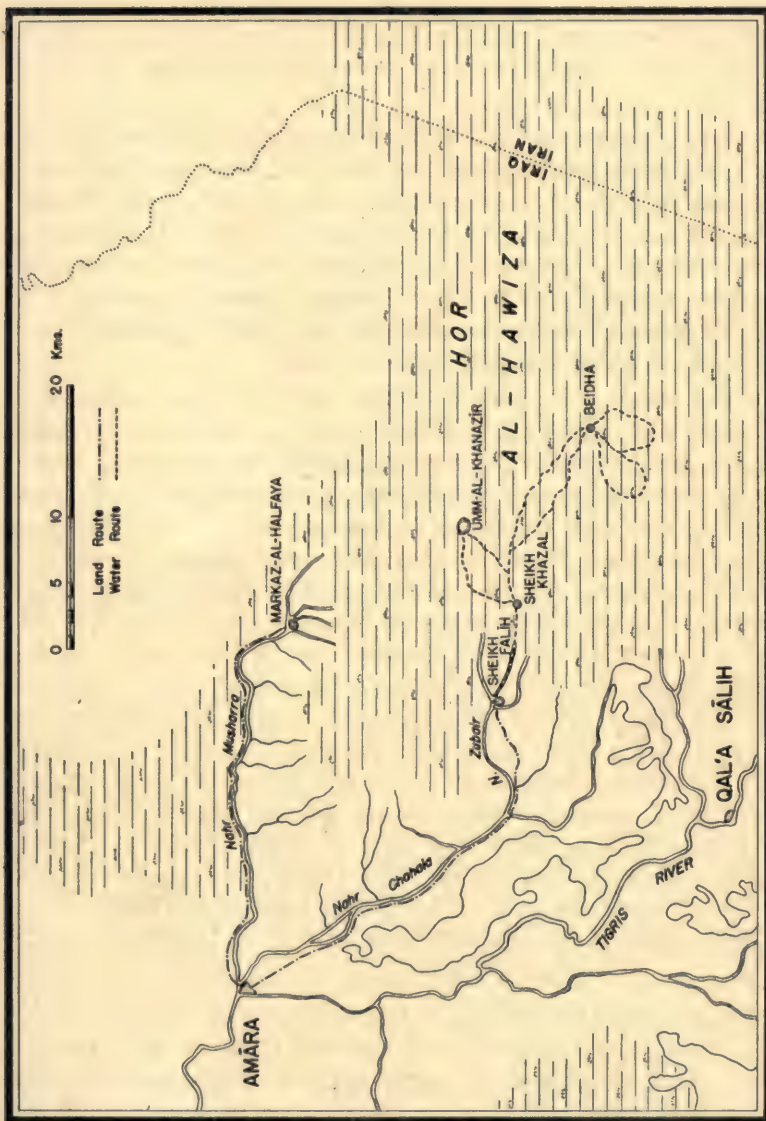
The Euphrates River, flowing from Darraji into the Shatt al Arab, forms the southern boundary. The eastern boundary follows the Iranian-Iraq frontier in a southerly direction from Bagh-i-Shahi to Failiya, meeting the Euphrates River at the Shatt al Arab.

Physical Features.—This area constitutes part of the great alluvial plain of Iraq. With the exception of the isolated Jebel Sanam, approximately twenty miles south of Az Zubair, and the Arabian Desert, which rise 508 and 100 feet respectively, there is no place higher than forty-six feet above sea level. The Shatt al Gharraf, three miles downstream of Kut al Hai, approximates this with an altitude of forty-five feet. Suq ash Shuyukh lies at ten feet above sea level, An Nasiriya at fifteen, Shatra reaches thirty, and Qala Sikar only thirty-nine feet, so that the effect of the tide is felt as far up the Euphrates as Kabaish. The eastern and northern boundaries have an altitude ranging from five feet above sea level at Failiya to forty-six feet at Sheikh Saad, an insignificant difference over a distance of 263 miles.

The physical features of this area graduate from arid, unproductive desert into lands suitable for the grazing of camels and sheep, into fertile and cultivated areas dependent upon controlled irrigation, and into marsh land, which in its turn merges into a vast expanse of open water.

To the east of An Nasiriya the Euphrates River splits into many channels, which find their way into the Hor al Hammar, bordered, especially to the north, by vast marshes dense with reeds growing to a maximum height of twenty feet. The Euphrates has two main

¹ The greater part of the information contained in this chapter is based on data obtained prior to 1930, although in 1934 every effort was made to check the accuracy of the statements.



MAP 2. Route of Expedition east and southeast of Amara.

channels. The old waterway, passing Kabaish at the eastern end of the Hor al Hammar, joins the Tigris at Al Qurna. This channel is used by steamers. The new course winds through the shallow expanse of open water lying to the north of the Basra-An Nasiriya Railway, finally finding its main outlet into the Shatt al Arab at Qarmat Ali.

A considerable quantity of water from the Tigris reaches the Lower Euphrates via the Shatt al Hai, which takes off at Kut al Imara and flows down to three miles south of Kut al Hai, where it is also known as the Shatt al Gharraf until it becomes the Euphrates near An Nasiriya. The amount of water in the Gharraf is dependent on the level of the Tigris at Kut al Imara. Except for pools, which become brackish, the channel runs dry by September and remains waterless until the end of December or later.

To the north and south the Tigris River divides and irrigates this region, which would otherwise be desert as barren as the Nefud. The soil near the Tigris is free-working and, like calcareous loam, is inclined to be salty in the depressions. In the area north of Amara, land is irrigated only two miles inland on either bank of the river. Beyond stretches a desert covered with scrub useful only for fuel. The reaches between Amara and Al Qurna are intersected by numerous canals, providing the district with some of the richest rice fields in Iraq and creating extensive marshes, which deprive the Tigris of sufficient water for easy navigation. Below Al Qurna, however, and to the east of where the Tigris and Euphrates meet and form the Shatt al Arab, desert again predominates, although for the greater part of the distance between Al Qurna and Khorram Shahr (formerly Muhammera), especially below Basra, the left bank is fringed with date palms stretching inland to a depth of almost two miles. Between Basra and Khorram Shahr some 90,000 date trees are cultivated on long islands, which lie so close to the left bank of the Shatt al Arab that they appear to form part of the mainland (cf. Dowson, 1921-23).

Drainage from the Kurdish hills to the north, by a number of streams such as the Great Zab, the Little Zab, and the Diyala, provides the Tigris with more water and silt than are found in the Euphrates. Below Amara the Tigris is much reduced by numerous canals, which carry a great portion of its water into extensive swamps, thus rendering the reach between Qala Salih and Al Uzair, known as "the Narrows," almost unnavigable in the low water season. A large proportion of this water returns into the Tigris, upstream from Al Qurna.

The waters of the Euphrates join those of the Tigris partly at Al Qurna, forty-six miles above Basra, and partly at Qarmat Ali, five miles above Basra. Together they form the Shatt al Arab, a fine river 1,200 yards wide and navigable as far as the Al Qurna bar for ocean-going steamers.

The Shuwaiyib River, three and one-half miles below Al Qurna, drains the Hor al Hawiza. This great belt of marshes, which lies a few miles east of the Tigris between Al Qurna and Qala Salih, is fed by streams from the Iranian hills, chief of which is the Karkheh. The Shuwaiyib enters the Shatt al Arab from the northeast, but the country near the mouth is flooded in spring or after rain. The two rivers are connected by the Ruta Creek, which enters the Tigris near Pear Drop Bend, just below a conspicuous group of palms about ten miles above Al Qurna. The upper course of the Shuwaiyib is lost in the marshes to the north.

Ruta Creek has a maximum width of thirty feet but its average width is about one-third of this figure. The depth remains constant.

Extending east toward the Hor al Adhaim (Azem) is the Michiriya Canal, about two miles above Qala Salih. The Majar al Kabir Canal, which runs southwest to the Hor al Hammar, about sixty miles distant, is unnavigable for flyboats.

The Majar as Saghir joins the Hor Umm Tafra with the Hor al Hammar.

Running southwest across the marshes, the Abu Tabr Canal, six and one-quarter miles south of Amara, is believed to lead eventually to the Hor al Hammar, a distance of about fifty miles. It is also unnavigable for flyboats.

Immediately above Amara, the Chahala and Musharra canals, which have a single mouth at the north end of the town, flow into the Hawiza marshes, the Musharra running in an easterly and the Chahala in a southeasterly direction. Except for small launches, both are unnavigable, the Chahala because of its regulator and the Musharra through lack of water.

From March to the end of June, when the Euphrates and Tigris are in flood, it is estimated that 4,000 square miles are inundated and covered mostly by "sheet water," the borders and shallower portions of which are marsh, thickly grown with reeds and intersected by many channels known only to the local inhabitants.

After the rivers subside these marshes become dry land, but the shallower "sheet water" becomes a marsh. The deeper water remains as permanent lakes of which the most important are the

Hor al Hammar, Sadifa, Abu Ajul, Ghamuga, Al Hassuna, Tallya, and Butaniya.

The remainder of the country is either desert or cultivated land.

Rate of Land Formation.—According to early Sumerian records on cuneiform tablets, Eridu, the modern Abu Shahrain, twenty-three miles southwest of An Nasiriya, was one of the oldest cities of Sumeria. Shortly after its foundation Eridu became a flourishing port¹ on the Persian Gulf. It is described in cuneiform texts as "standing on the shore of the sea." The mounds of Eridu, surrounded by desert, now lie some 160 miles distant from the Persian Gulf.

From early texts it is possible to trace roughly the northern limit of the Persian Gulf at the dawn of the historical period. It appears to have extended from the Arabian Plateau, where the coast line ran approximately due north, to Eridu, and crossed the Euphrates about eleven miles northwest of An Nasiriya; thence it ran just south of Shatra and continued in a general northeasterly direction to the Tigris, turning southeast below the Elamite hills of Khuzistan (formerly Arabistan).

These figures and other data suggest the rates at which, from time to time, the land has advanced southward at the head of the Persian Gulf. This advance is due to the accumulation of sediment brought down in suspension by the Tigris, the Euphrates, and the Karun and deposited on the sea bed when the current is checked as the Shatt al Arab reaches open water. Thus, for example, the location of Eridu, a sea port about 4000 B.C., indicates a rate of advance of 121 feet per annum. Khorram Shahr, a port in the time of Alexander the Great, is now fifty miles from the sea. In this case the rate of advance was 113 feet per annum.

Recent tests have shown that the rate of advance is approximately ninety feet per annum. This gradual reduction in the rate of formation of the land is to be expected because, as the delta increases in length, the slope of the river bed becomes more level, thereby reducing the velocity of the current on which the amount of sediment brought down in suspension depends.

Climate.—Irrigation and marsh water may lower or raise temperatures. After the spring floods, Al Qurna, for example, is surrounded by extensive marshes. Consequently, the presumed maximum

¹ On December 29, 1939, Mr. Frederick Richardson informed me that on the basis of his geological survey of southern Iraq this statement is incorrect. His results will appear in an Oriental Institute Publication.

temperature is lowered and the minimum raised during May and June. Both temperatures, especially the minimum, are decreased during August and September.

AVERAGE MINIMUM AND MAXIMUM TEMPERATURES IN 1918

Place	May	June	July	August	September
Amara	70-94	75-102	79-110	78-109	74-107
Al Qurna.....	75-92	77- 97	77-103	72-105	68-105

January is the coldest month, July or August the hottest. As in all semi-arid regions, the range in temperature is wide. Although 115° is normal at Basra during the summer, the highest recorded temperature was 129° during July, 1921. On the other hand, frost is often experienced in the cold season, the minimum recorded temperature being 23.7° in January. Bitterly cold winds sweeping down from the Pusht-i-Kuh make the atmosphere of the Amara district appear far colder than farther south.

During August and September, the date-ripening season, the wind comes from the south, bringing with it a moist atmosphere. Mosquitoes and sand-flies are very numerous in these months. The normal speed of the wind rarely exceeds three miles per hour, although sudden gales are not unknown.

The rainy season begins in November, reaching its zenith in December and January. Except in years when the rain starts late, or is below the average, little falls after the middle of April. The average amount of rain in the district near Amara is thirteen inches over a period of thirty days, while south of Al Qurna not more than ten inches fall over the same period. Hail is rarely encountered in these parts. Snow has never been recorded.

Mirage.—Between April and September, mirage is to be seen everywhere in the desert from about 10.00 to 16.00 hours. Mirage makes that part of the desert between the observer and the sun appear like water, and exaggerates the size of objects. It is impossible to distinguish anything clearly either in or beyond the mirage, which appears 600 or 800 yards from the observer.

Grazing.—Shortly after the first rains have fallen, usually in December, large areas of the previously brown desert become green with grass, affording good grazing for sheep and cattle until the end of May. At that time, except for the scrub (*shok*) upon which the camels feed, the desert is barren.

The best cattle in this area are found in the region north of Amara, and especially in the Ali Gharbi district, where the quality of sheep is probably as good as that found in other parts of Iraq. Horses

and cows are of average quality, although some good breeds of horses are seen in this area. Transport camels are found only north of Amara, while buffaloes live chiefly in the marshes between Qala Salih and Al Qurna, and cows in the Al Qurna district.

Agriculture.—The Tigris area, like the greater part of Iraq, is essentially agricultural. There are no manufacturing industries, and the only trade is with Baghdad, Basra, and Iran. A great deal of the commerce is local, taking the form of buying, selling, and interchanging the various products of the land. The Amara *Liwa* is famed chiefly for its rice fields, although wheat and barley are also grown extensively, the latter in the districts north of Amara and the former between Amara and Qala Salih, where the land irrigated by the Chahala, Butaira, and Majar al Kabir canals is the richest. Farther south, cultivation of fruit and vegetables is the main form of agriculture.

The products of the country comprise wheat, barley, rice, millet (*gowari*), mash, sesame (*simsim*), tomatoes, lady's-fingers, brinjals, lettuce, cucumbers, cabbages, melons, onions, turnips, radishes, carrots, beans, spinach, pumpkins, beetroot, cauliflower, dates, grapes, apples, apricots, plums, pomegranates, limes, figs, nectarines, pears, oranges, grasses (*shuraib, fluih, thail*), alfalfa, and Egyptian clover.

Both winter and summer crops are grown. The winter crops of wheat and barley are cultivated in the districts north of Amara, the proportion being six tons of barley to one ton of wheat. Rice is the most important summer crop. All the rice fields are to be found in the marsh land between Amara and Azair. Maize is sown with the rice; sesame is grown chiefly at Ali Gharbi, but is also found in small quantities between Ali Gharbi and Butaira. With the exception of wheat and barley, which are sown from November to January and harvested from May to June, the grains are sown from March to June and harvested in September.

Wheat and barley are sown broadcast while rice may be grown on the silt deposited in the marshes during the floods (*afla*), or planted in small pots (*harfi*) and transplanted in June (*shitil*).

The method of watering rice called *shitwi* depends upon rain for moisture after ploughing and upon floods for generation and growth. There is another system known as *saiji*, involving canals and a succession of reed and mud dams (*haml*, sing.) that raise the level of the water sufficiently to flood the rice fields.

All vegetables are grown between the Butaira Canal and Kasareh. During the War (1914-18) the cultivation of European

vegetables was encouraged, and the demand for these has increased the production. Vegetables are planted by the natives in the following seasons:

Spring.—Lady's-fingers, brinjals, lettuce, melons, and onions.

Autumn.—Cabbages, turnips, carrots, beans, beetroot, and cauliflower.

Autumn and Spring.—Tomatoes, cucumbers, radishes, spinach, and pumpkins.

Vegetables are almost always irrigated by lift, in contrast to the flow system used for grain. The most common machines for this purpose are pumps (*tabia* or *mutbah*), i.e. basket scoops worked by two men; a *charid*, worked by a horse, which draws water up in skins so that it can be distributed by small watercourses (*ahliyahs*); a *naur* similar to a Persian water-wheel, which can be worked by one man, i.e. a long pole fixed to a horizontal bar, weighted at one end by earth covered with sacking, while at the other end is a bucket or skin.

A large variety of fruits is grown in the gardens at Amara, Qala Salih, and Al Qurna, but, with the exception of dates, only in very small quantities. To provide sufficient moisture there are many irrigation pumps. The *charid* is employed throughout this region.

Alfalfa, which is plentiful in this district, is sown very lightly in September after the land is watered so that the seeds sink in with the water. The best grasses are usually found between Ali Gharbi and Amara.

Forage crops show rapid growth during the winter, but do not progress in summer when a shortage of grazing is usually felt. At this period the herds migrate from the left bank above Amara to the foothills of the Pusht-i-Kuh. The strong sun and dry air render the successful growth of really nutritive forage crops difficult during these months. In places where water is available, alfalfa is easily grown, yielding a supply of green forage and at the same time improving the soil. If the river rises early, the grass is cut in May and the quality is better.

Agricultural implements are very primitive, chiefly because they are sufficient for the purpose of the Arab and entail no expense. Those used in this area, almost all of which are manufactured by the blacksmiths of Amara, consist of:

(1) An Arab plough (*fiddan*) made of two shafts, at the end of which is fixed a bent piece of wood with an iron head, shaped like a

curved arrow. The head is put into the ground from six to ten inches, according to the moisture and smoothness of the earth; two oxen, guided by one man, draw this plough.

(2) A curved saw (*minjal*) with a wooden handle, used for harvesting. Although he has a slow method of cutting the crops, the Arab shows great skill and dexterity, holding the stalks in one hand and cutting with the other (cf. Field, 1935a, Fig. 37).

(3) A five-pronged, wooden fork, used for winnowing barley. After the barley has been threshed by bullocks trampling over the straw, the *bhossa* is separated from the grain by means of this fork.

(4) A long-handled shovel (*misha*) with a footrest above the blade to press the shovel into the ground. This is used by Arabs throughout Iraq.

(5) Axes and curved knives, used for cutting trees.

Among insect pests is the locust (*jirad*), which attacks wheat, barley, tomatoes, lady's-fingers, melons, and cucumbers. There are two kinds: the *Abu Dubailah* ("father of an elbow," so-named because of its shape) become numerous during years of heavy rain; and the locust of Nejd (*jirad Najdi*) appears about once every ten years and at different seasons of the year. Because of their destructiveness, locusts¹ are believed by Mohammedans to be the revenge of Allah.

There are several varieties of ants: a red ant (*humairah*) destroys rice; a white ant (*irahah*) eats maize and mash; a white ant (*zaluntah*) eats vegetables and rice; a small red and black flying ant (*ikhzail*) destroys barley, wheat, and rice. In addition to the insects the natives are sometimes pestered by tortoises (Pl. 77), which eat the roots of the rice.

Trees.—With the exception of those bearing fruit, only two varieties of trees, *safsaf* and *gharab*, are found in this district. Both have a life of approximately fifty years. The *safsaf* is a kind of willow, growing on river banks or in gardens, whose wood is used in making beams for roofs, and ploughs. *Gharab*, the Euphrates poplar, is used in the manufacture of planks, beams, *mashufs*, and also as fuel; its leaves are boiled to produce a yellow dye.

¹ In March, 1928, during excavations conducted by the Field Museum-Oxford University Joint Expedition at Jemdet Nasr, which lies eighteen miles northeast of Kish, we were plagued with a swarm of locusts. In mid-afternoon the sky became gray and finally almost dark, some time before sunset. The flight lasted from 15.00 hours to 04.00 hours on the following day. We were invited to eat fried locusts, a local delicacy. They were stripped of their wings and cooked over smouldering camel dung. They tasted like shrimps. When daylight came, millions of locusts covered the ground, which appeared to be literally crawling with tired locusts. Not a blade of early spring grass nor a leaf of camel's-thorn (*hatab*) remained.

Minerals.—Extensive salt bands at Qala Salih and Musharra have yielded, individually, as high as 150,000 kilograms a year. In less abundant quantities, salt is also produced at Amara, Sirut, and Sayyid Nur. Bands of inferior quality exist in other parts of the area and it is thought that at a depth of not more than six feet both banks of the river between Amara and Al Qurna would yield this mineral. Large and deep wells are sunk until salt water of an amber color appears. This water is drawn into salt pans and allowed to evaporate until the salt crust, about half an inch thick, forms on the surface. This muddy salt is then removed, washed in clear salt water, and spread out to dry on reed mats.

From a chemical point of view the percentage of lime is most striking. The soils contain a high percentage of valuable ingredients such as nitrogen, phosphoric acid, and potash.

Gemento, similar to gypsum (*juss*), is present at Duwairij. At present little use is made of this, except for experiments and local requirements such as burning it and plastering graves, although the Arabs use it as a substitute for mortar.

Bricks are made in numerous places. The largest production comes from the Harta *Nahiya* near Qarmat Ali. At one time there were twenty-five kilns, employing 250 men. Each large kiln (Pl. 226) can produce 30,000 to 40,000 bricks in an eight-day shift. There are kilns also at An Nasiriya, Shatra, Qala Sikar, Suwaiq, Karradi, and Suq ash Shuyukh.

Ghee is tinned at Shatra.

Industries.—In the Lower Euphrates-Tigris region, the men, excluding those who are merchants, after the age of sixteen usually follow some profession. Listed in order of social prominence they may become government servants, cultivators (*fallahin*), planters (*taab*), boatmen, dealers in reeds and mats, fishermen both in salt and in fresh water, buffalo breeders, weavers, or coolies.

The weaving of woolen *abas* at Al Qurna, Shatra, and especially at Suq ash Shuyukh, where the men do the weaving, forms one of the more important manufactures of southern Iraq. Lengths of cloth are exported to Al Kuwait and Al Khamisiya for sale.

Boat-building is carried out to some extent on the banks of the Shatt al Arab, but the most famous boat builders in the country are the Mandeans. They construct all types of river craft from *mahail-ahs* down to small *mashufs*. Al Huwair and Khas have great reputations as boat-building localities; both are situated on the Euphrates between Al Madina and Al Qurna (Pls. 141-144).

Among native craft (Pls. 145-147) are the following:

Mahailah or *Safinah*.—These boats are found everywhere from Fao to Baghdad. They vary in length from thirty to eighty feet, with a beam of from ten to twenty-five feet open, but with a poop in the larger types, and one mast provided with a lateen and staysail. The *safinahs*, built in Baghdad, are coated with bitumen. When wind or stream is adverse they are either poled or towed by a rope from the top of the mast. From ten to a hundred tons of cargo can be carried. The draught of a loaded *safinah* is from three and one-half to four and one-half feet. The crews vary from three to eight men, and a large *safinah* can carry up to sixty passengers. The smaller *safinahs* are generally known as *mahailahs*.

Balam.—The Basra type of this boat is about twenty feet long by three feet across, and long and narrow in shape. It can be rowed or sailed, but is more generally towed or punted.

Mashuf.—This is a canoe of reeds or thin wood covered with bitumen. The length is from fifteen to eighteen feet, the boat being easily and rapidly propelled by one man, who sits as low and as far aft as possible and uses a paddle. A large *mashuf* (Pl. 145, Fig. 2) can carry from four to six men with a second paddler in the bow.

Quffah.—The *gufa*, rarely seen below Baghdad, is a coracle-shaped craft peculiar to Iraq. This type of craft is of very ancient origin, being frequently depicted on Chaldean and Assyrian reliefs. It is a strong wickerwork basket, thickly coated with bitumen. In appearance the *gufa* is a hollow spheroid, four to five feet in diameter, with the central portion of the top removed. The *gufa* is propelled by two men with paddles, and will carry four or five passengers; a very large *gufa* can carry as many as twenty people.

The manufacture of mats, baskets, and other articles from the marsh reeds in this area is mostly carried out by the Bani Asad and Madina tribesmen, whose marshy habitats to the east of the Hor al Hammar are eminently suited to the industry. Reeds are of three kinds: *chaulan*, *bardi*, and *qassab*. All are good food for cattle when the plants are young and tender. *Chaulan* is used for the manufacture of soft mats (*bassir*); *qassab* is used for coarse mats (*buwari*); *bardi* and *qassab* make good fuel and are much used in brick kilns. From the reed mats the Arabs build their mat huts¹ (*saraiif*). Reeds and mats are collected on the rivers, formed into rafts (*garah*), and floated down to their destination.

¹For building of reed huts see *Journal of American Oriental Society*, March, 1939, vol. 59, No. 1, p. 109 and references in footnote 3.

History.—The Muntafiq Confederation is a powerful tribal league that occupies an area in the Lower Euphrates-Tigris region from Darraji to Kabaish, extending as far north as Kut al Hai on the Shatt al Gharraf.

In 1920, the link between the various units of the league was no more than a common recognition of the now nominal paramount authority of the Sadun. They, the ruling family of the Muntafiq, are descended from Mani, one of the Sherifs of Mecca, who, about A.D. 1600, fled to the Euphrates to escape the consequences of a feud. Mani married a daughter of the ruling family of the Bani Malik and had a son by her named Shabib. The Bani Malik were attacked and heavily defeated by the Ajwad, Mani himself being killed. The Bani Malik made their escape into Nejd and took Shabib with them, since he was the grandson of their own sheikh. After an exile of three years, the Bani Malik, reinforced from Central Arabia and led by Shabib, fell upon and almost exterminated the Ajwad, who were encamped at Safwan. A few men and a total of forty women are said to have been all that were spared. Shabib thus, by virtue of his military powers, became leader of the Bani Malik and overlord of the Ajwad, this combination becoming so powerful that it was joined by the Bani Said, a tribe of the Jazira. These three divisions formed the Muntafiq league.

Up to about 1870, the Muntafiq tribes under the Sadun were almost independent of Turkish rule. They paid tribute but no rent to the Sadun.

History records that the Tigris has always been divided into two distinct parts: the northern, stretching from Al Qurna northward, inhabited some 400 years ago solely by the Bani Rabi'ah tribe, whose territory is now on the Shatt al Gharraf, and many of whose former sections are with the Bani Lam; and the southern, from Al Qurna to Failiya, the home of the Chaab.

The tribes of the lower Tigris district, the descendants of the original families of Al bu Muhammad, Bani Lam, Azairij, Al Sawaad, and Sudan tribes, originate from Yuari'ib's line, while the Bani Rabi'ah, from whom spring the Al bu Darraj, the Chaab, Bani Malik, and Bani Asad, can be traced back to Abir.

In 926 A.H., Sulaiman, the ninth Sultan of Turkey, conquered Iraq from Mosul to Fao, and for the first time introduced Turkish government into the country. Then the land now inhabited by the Bani Lam was owned by the Buwaish, a section of the Bani Rabi'ah, which later resided at Ahwaz under the Sheikh of

Muhammera.¹ The chief of the Buwaish, Mulla Barkat, sometimes known as Mubarak, was king of Hawiza and sole owner of the lands from Kut al Imara to Hawiza, on the left bank of the Tigris, while the right bank was in the possession of the Muntafiq. It was during Mulla Barkat's reign that Barrak, one of the grandsons of Lam, migrated to Hawiza and settled as a subject of Mulla Barkat. Later Barrak's son, Hafidh, having quarreled with Mulla Barkat, fought and defeated him with the assistance of the Chaab, Darraj, Khazraj, and Hallaf sections of the Bani Rabiah. From that day these four sections became subjects of the Bani Lam, and the Bani Rabiah were expelled from these lands, part taking refuge in Iran and the remainder on the Shatt al Gharraf, where the greater portion of the tribe still resides.

A century later Muhammad, the founder of the Al bu Muhammad, migrated to the Chahala and was accepted as a subject of the Bani Lam, whose position remained the same until Faisal al Khali-fah, of the Al bu Muhammad, attacked and defeated them, seizing the districts of Javrah and Thulthain. From this date quarrels were of frequent occurrence between the two tribes, until the Turkish Government sent troops, under the command of Muhammad Pasha, to restore peace, an object that he attained without fighting by dividing the district equally between the two tribes.

For many years the Bani Lam and the Al bu Muhammad lived in comparative peace side by side, each transferring its hatred of the other to the Turkish Government. In 1908, war again broke out between the Al bu Muhammad and the Bani Lam. Under the leadership of Ghadhban ibn Bunaiyah, the Bani Lam were supported by the Sudan, an ancient tribe that migrated 200 years ago from the district of Hilla, and by the Al Sawaad and Azairij, both of which claim origin from the same tribe, Bani Himyar. The Al bu Darraj, an offshoot of the Bani Rabiah, allied itself with the Al bu Muhammad. The Bani Lam were victorious and seized the lands from Al Kumait to Majar as Saghir, but the Turkish government interfered and made alterations in the distribution of the lands that were resented by both tribes and resulted in a combined attack on the Turkish troops stationed in the town of Amara. The tribes were defeated, and Ghadhban, the Bani Lam chief, was dismissed and his lands reapportioned. At the outbreak of the War in 1914, Ghadhban was recalled and made Commandant of the Arab forces under

¹ Although by order of the Shah, Muhammera has been changed to Khorram Shahr, the term Sheikh of Muhammera has been retained throughout this historical summary.

Muhammad Pasha Daghestani at Ahwaz, remaining loyal to the Turks until the fall of Amara in 1915, after which, at the head of the Bani Lam, he supported the Turks or British according to the swing of the pendulum of success.

Toward the end of the sixteenth century the whole district from Al Qurna to Fao, on the left bank of the Shatt al Arab, was governed by the Bani Amir, a section of the Chaab, a tribe of Quraish, in Arabia. This section ruled for 150 years until the powerful Muntafiq defeated them and seized their property. The Chaab, who are said to have come from the western shores of the Gulf, were at the time residing in Persian territory, and, seizing their opportunity, took the lands and settled in these parts. While on the Shatt al Arab they followed the profession of pirates, and in spite of their coming frequently into collision with the East India Company, they managed to remain supreme within their own territories. Being within both Persian and Ottoman boundaries, they found themselves under Persian and Turkish rule, but with the exception of paying tribute to the Shah, they were virtually independent and appeared frequently in the troubled annals of Lower Iraq as allies of both Persia and Turkey.

At the beginning of the nineteenth century, a section of the Chaab, Al Muhaisin, emerged as rivals, on account of the murder of the brother of *Hajji* Jabir, of the Muhaisin section, by a Chaab Chief. *Hajji* Jabir, father of Sheikh Khazal, the Sheikh of Muhammera, at the head of Al Muhaisin, attacked and defeated the Chaab, but they reorganized their forces and not only turned the tables on the Al Muhaisin, but also took *Hajji* Jabir prisoner to Persia. He made terms with the Persian Government at Tehran, and was allowed to return to Khorram Shahr, when he again attacked and defeated the Chaab and became chief of the whole district. His rule of the tribe continued from 1819 to 1881, during which period he gradually increased their numbers by admitting foreign sections who agreed to submit to his rule. His son, Sheikh Mizal, succeeded him, but was not so well disposed toward the British. He was, however, hated by the tribe and finally assassinated in 1897. Khazal, his younger brother, became, by tribal election, Sheikh of Al Muhaisin.

Many types of tribal conditions are represented in the Lower Euphrates-Tigris district, although there are no distinct divisions between these classes.

(1) The settled tribal area is inhabited by the Muntafiq and the Al Jazair confederations.

(2) The nomadic tribal areas comprise certain wandering tribes to the west and east of the Gharraf and the Beduin tribes in the Shamiya, to the south of the Basra-Darraji Railway, who wander into this area.

(3) The semi-tribal area lies near Al Qurna and in the vast marsh area to the northwest, west, and southwest.

(4) The non-tribal area extends from the vicinity of Al Qurna down to Fao.

Settled Tribal Areas.—Tribes are administered through their own sheikhs. The sheikship normally passes from father to son or at least remains in the family, unless the administration has a special reason for making a change.

Although the majority of rural settled Arabs have a regular tribal organization such as that of the Abuda or the Bani Asad, there are many thousands who belong to so mixed a community that tribal ties have become entirely or almost entirely extinct. Such conditions are found in the highly civilized areas and among the population of the date gardens on the banks of the Shatt al Arab downstream from Basra. This population is either pastoral or agricultural or a combination of both.

The Muntafiq is not a "tribe" but a large, loose confederation of Arab tribes. The Muntafiq tribesman is either a settled cultivator (*hadhr*) or a shepherd (*shawiya*), who uses the donkey as a means of transport in place of the camel preferred by the Beduin.

The Muntafiq fall into three main divisions: the Ajwad, the Bani Malik (colloq. Malich), and the Bani Said. Of these the Ajwad had the least cohesion. The Bani Malik, also loosely united, were divided into two main confederations known as the Mugarrah and the Bani Khaiqan. The Bani Said were the most compact and corresponded more closely to a tribal group.

In the case of a gathering of all the Muntafiq, as for example, the tribal concentration at Shuaiba (colloq. Shaiba) in 1915, the various tribes grouped themselves into their respective divisions. Normally, however, these three main divisions were merely nominal.

The Al Jazair, a confederation of settled tribes, some of whom are Muntafiq, are located in the vicinity of the Hor al Hammar. It is probable that at one time the whole of the Al Jazair was Muntafiq, for local tradition places this confederation as Bani Malik by origin. Presumably, it was only when the links that bound the Muntafiq together weakened with the waning authority of the Sadun that the sections east of Kabaish detached themselves.

The tribes composing the Al Jazair were the Muntafiq groups of the Bani Asad, Al Husaini, Bani Hutait, Ibadah, and Bani Musharraf, and the non-Muntafiq Bani Mansur.

The Arabs, who live in towns, are looked down upon by their rural brethren as being merchants and generally contemptible. Under such conditions men, each of whom belongs by origin to a separate tribe, are found living together. The result is that the population soon becomes so mixed that no tribal bonds remain.

The Nomadic Tribal Areas.—These tribes, which included the Dhafir and the Ajman, were pastoral tent dwellers, breeding either camels or sheep, and donkeys, from which they obtained their livelihood. They were tribally organized. The tribes in the Shamiya were dependent to a very great extent for supplies on the "Desert Ports" such as Az Zubair and Al Khamisiya.

The Semi-Tribal Area.—This is the connecting link between the tribal areas under sheikhs and the non-tribal areas under the *mudirs* of *nahiyas*. Al Madina, for instance, was not a tribe but a *nahiya*, being, however, under a sheikh and not a *mudir*. The Budur and the Bani Said were also examples of this group.

The assimilation of the nomad to the life of a settled cultivator is not immediate. Indeed, in many cases a tribe in the process of settlement might revert to its original nomadic condition because of quarrels with neighboring tribes or failure of crops. Thus, the semi-nomadic tribes could be distinguished from the truly settled cultivators by their far greater dependency on live stock.

The Non-Tribal Area.—This may be said to extend from Dair southward to Fao. The great date-garden district was inhabited by a population that had become so mixed, because of the advent of settlers who had migrated from the north and from districts on the left bank of the Shatt al Arab, that tribal conditions were often non-existent. There was no large tribal organization; in many cases there were small communities of tribesmen who, to some extent, maintained their tribal connections, but those tribal ties were gradually becoming less cohesive.

The Madan.—In the vast marsh area, the settled districts that are situated along the river and canal banks run back into the marshes where they have no definite limits. The marshes are inhabited by *Madan*, a general term that includes all those marsh dwellers who, although organized tribally in a small way, have no cohesion on a large scale. They are fishermen, reed gatherers, and breeders of buffaloes, often without fixed habitation, and are accustomed, with

the subsiding floods, to come down to the pasturage near the river and canals.

No *Madan* sheikh has much influence except over his own small unit; the groups fall under the authority of whichever sheikh administers the territory in which, or on the borders of which, they happen to be. Frequently they wander from the domain of one sheikh into that of another. The distinction between *Madan* and non-*Madan* is indefinite and appears to be one of calling rather than of race. No anthropometric data were available.

POPULATION, 1920			
Region		Number	
Muntafiq area excluding Bani Asad.....		323,600	
Al Qurna including Bani Asad.....		36,964	
Basra area on right bank excluding Basra municipality and Az Zubair.....		41,515	
Basra municipality.....		40,997	
Az Zubair.....		12,000	
Total.....		455,076	

<i>Muntafiq Division</i> (excluding Bani Asad)		<i>Three Nahiya of Basra Division</i>	
Group	Number	Nahiya	Number
Shiahs.....	305,580	Abul Khasib.....	12,546 Shiahs
Sunnis.....	11,150		11,909 Sunnis
Mandeans.....	3,000	Fao.....	85 Other religions
Kurds.....	1,982		8,550
Persians.....	1,300	Harta.....	8,425 (530 <i>Madan</i>)
Jews.....	600	Total.....	41,515
Turks.....	38		
Total.....	323,600		

Of the above, 29 per cent were men, 34 per cent women, and 37 per cent children.

<i>Basra Municipality</i>			
District	Number	Religion	Number
Basra town.....	20,680	Christians.....	2,057
Municipal villages.....	13,181	Shiahs.....	25,813
Ashar.....	7,136	Sunnis.....	6,620
		Jews.....	6,288
		Others.....	219
Total.....	40,997	Total.....	40,997

Although the majority of the population of this area were Shiah Arabs, the following were Sunnis:

- (1) The Sadun Family.
- (2) The Manna Family.
- (3) The Shamiya Beduin tribes and others mentioned as Sunnis in the Tribal Lists.

(4) The population of Az Zubair.

(5) Part of the population of Al Khamisiya and some of the townsmen of An Nasiriya and Suq ash Shuyukh.

There were also some Christians, Jews, Subba (Mandeans), Kurds, Persians, and Turks.

The Sadun, or the titular ruling family of the Muntafiq, are Sunnis; the tribesmen of the Muntafiq are, with very few exceptions, Shiahs.

Although the sedentary and "Donkey Beduin" tribes of Iraq are, for the most part, of good Arab stock and can claim descent from the best old blood of Arabia, they have lost caste by settling down and becoming Shiahs, being now despised by the genuine Beduin, who will not intermarry with them.

The Sadun, however, who have lived in Lower Iraq since the sixteenth century, are in a separate category. Descended from the family of the Sherif of Mecca, Sunni to this day, and Beduin in their manner of life, they are accepted as equals by the pure Arabs of Arabia.

The Shiah tribesmen are hospitable and can not, in any way, be said to be fanatical. They take a practical view of life and are ready to adopt new ideas, such as modern methods in agriculture, if it is proved to them that the new way is an improvement on the old.

The Sunni tribesmen vary little in characteristics from the Shiahs. The Sadun, as befits their calling, are more dignified and straightforward than the Shiahs or Sunnis.

The Jews are not popular among the Arabs and are generally looked down upon as the local money makers, except in large towns such as Basra, where the Jews are an influential community and civilization has altered original ideas.

POPULATION ACCORDING TO RELIGIOUS DENOMINATIONS

(From Boesch, 1939)

Region or Area	Sunnis	Shiahs	Christians	Jews	Subba	Others	Totals
Tigris*	4,000	288,800	200	2,000	500	0	295,500
Amara	4,497	255,995	229	2,540	0	1,972	265,233
Basra	53,752	182,381	4,150	7,260	0	378	248,812†
Muntafiq	3,337	221,545	55	555	0	1,734	227,226
Southern Desert	2,000	18,000	0	0	0	0	20,000

*These figures were not taken from Boesch.

†This figure is incorrect; the total is 247,921.

The Christians of the Tigris region, most of whom live in Amara, may be divided into two classes, Chaldeans and Syrians. Chal-

deans are to be found in many towns between Mosul and Basra. The majority, however, live in Mosul, the headquarters of the Patriarch of Babylon. There were about twenty houses of Syrians in Amara. With the exception of the Armenians all Christians are Roman Catholics.

Population.—The lower reaches of the Tigris are inhabited almost solely by Arabs, who have migrated from Central Arabia. Other nationalities are to be found in the larger towns on the river banks, but with the exception of a few Iranis, never in the outlying districts. Similarly, nearly all the tribesmen are Shiah, Sunnis being found only among the better-class townspeople, while small numbers of other religious denominations have settled in the towns for commercial or other reasons.

The population of the Lower Euphrates-Tigris region consists of Arabs, Kurds and Lurs, Iranis, Subba, and Jews.

Arabs.—They derive their origin from Central Arabia and trace their descent to Qahtan, who is called the founder of the Arab race and after whom the Bani Qahtan tribe in Arabia was named. Although of the same basic Proto-Mediterranean stock as the Beduin, their long sojourn in Iraq has produced outward changes. Physically, they have profited by the improved conditions of living and are a contrast to the slender, half-starved Beduin of the desert. They suffer, however, from a loss of prestige, since the Beduins prohibit intermarriage.

Iranis.—Considering the proximity of Irani territory one finds the number of settled Iranis (Persians) in this area strangely small, totaling not more than 1,500. The Bani Lam claim a few in one of the smaller sections, the Nodah Ali, who are all Iranis by birth, while farther south, Iranis from Hawiza are occasionally to be found working among the tribes. Some Iranis also make their living in Amara as merchants and artisans.

Kurds.—They are divided into two classes, pure Kurds and Failiyah, sometimes called Irani "Kurds" or Lurs.

The pure Kurds emigrated from the Daudi, Jaf, Talabani, and Hamawand tribes, and also from Sulaimaniya and Kirkuk, settling for the most part in Amara. They intermarry with the Arabs and refuse to acknowledge the Failiyah as Kurds.

The Failiyah Lurs, the majority of whom are coolies, came from the Pusht-i-Kuh in Iran (cf. Hassan Kuli Khan tribe of Lurs of Pusht-i-Kuh in Field 1939a.). Half Kurd, half Iranian, they speak a broken dialect that is intelligible to both races. They comprise

a large part of the total population of Ali Gharbi, which trades extensively with the Pusht-i-Kuh. In Amara, all are employed as coolies to coal boats. At Qala Sikar and Karradi they practice cultivation on the Gharraf. They rarely intermarry with the Arabs.

Subba (Mandeans).—During the past 1,500 years, the Subba have been connected with this area. According to one tradition they lived originally in Iran, but were driven out by the Sun and Fire worshipers of that country, settling in Chahar Riz, which lies between Band-i-Bazugan on the left bank of the Shatt al Tib and the Pusht-i-Kuh. Here the Iranis again molested them and they fled, some to Hawiza and some to the Euphrates marshes in the district of Suq ash Shuyukh. The Iranis endeavored to obliterate all traces of their religion and burnt all the holy books they found at Chahar Riz. About 500 years later, however, one of these was discovered buried at that place, and the modern Subba holy books trace their origin to this volume.

About sixty years ago, part of the Subba from the Euphrates left with the intention of settling in Kut al Imara. In 1928 they formed a colony, which numbered about 500 persons. A few Subba also came from Hawiza. They are famed chiefly as gold- and silver-smiths (Pl. 167, Fig. 2), carpenters, iron-workers (Pl. 148), and *mashuf* makers.

In 1920, the Subba had headquarters at Suq ash Shuyukh and lived also at An Nasiriya, Kabaish, Bani Said, Khas, Al Hassan, Hakkam, Bani Khaiqan, Basra, and Bani Muslim. (For description of their cults, customs, magic legends, and folklore see Drower, 1937.)

Jews.—With the exception of about 200 Jews in Ali Gharbi and Qala Salih, the whole Jewish population of the area lived in Amara, having moved there from Baghdad and Basra when Amara came into prominence as a commercial town. They are engaged chiefly in trade, especially wool, grain, and money changing. On the whole they are a group isolated by both Christians and Arabs.

According to the 1919 census figures, the population of the towns in the Tigris district was 295,500, divided as follows: Arabs, 284,000; Kurds and Lurs, 8,000; Iranis, 1,500; Jews, 2,000. Of the total population the approximate percentage of men, women, and children was 30 per cent, 40 per cent, and 30 per cent, respectively.

In the western and southern part of the Lower Euphrates area no census figures are available. Wherever possible, data have been compiled on the important towns along the Euphrates.

An Nasiriya.—Built by Nasir Pasha about the year 1867. This town is situated on the left bank of the Euphrates and, being low-lying, relies for its protection from the floods of the Euphrates on the important Abu Jidahah bund, which is upstream on the left bank. Nasir Pasha wished to build the town on higher ground farther downstream but was overruled by Sadun Pasha. In order to protect the town from destruction by floods, further extensive bunds, often twenty feet in height, were constructed on both banks. The town was surrounded by a wall eight feet high, constructed in 1915.

The main building was the old Turkish *Sarai*, which was exceptionally well built. In 1920 An Nasiriya, which measured 1,650 by 570 yards, had about one thousand brick houses. The bazaar was well stocked and the streets were unusually broad and straight.

The population of An Nasiriya in 1920 was as follows: Arabs, 4,742; Jews, 521; Christians, 21; Mandeans (Subba), 633; Persians, 300; Turks, 23; Lurs (Pusht-i-Kuh), 281; Indians, 2. The population was divided into 2,073 adult males, 2,761 adult females, and 1,689 children under sixteen years of age.

Qala Sikar.—Situated on the left bank of the Shatt al Gharraf between Kut al Hai and Shatra, the town consisted of 400 brick houses, 100 mud dwellings, and 200 shops in the bazaar. In 1920 the population was composed of two-thirds Arabs and one-third Lurs from Pusht-i-Kuh, Iran. Fruit and vegetable gardens flourished for 600 yards downstream from the town. According to local information, up to about 1860 the land around the Gharraf was the haunt of the lion and the wild pig. The few inhabitants were almost entirely Beduin. A local character, named Sikar, built a fort on the present site of Qala Sikar. Eventually recognized by the Sadun as Governor of the district, Sikar was a man of energy who brought merchants from Baghdad and many Lurs to settle in the district. Qala Sikar has been twice flooded and rebuilt. It flourished until forty years ago when the trade routes and surroundings became insecure. Large numbers of inhabitants therefore left Qala Sikar and settled in Karradi and elsewhere.

Al Qurna.—This town stands on the bank of the Tigris just upstream from its junction with the old Euphrates channel. During 1920 the population numbered 1,941, composed of 1,841 Shiahs and 100 Sunnis. Ocean steamers of a draught varying from ten to fifteen feet, dependent on the height of the river and the state of the tide, can reach Al Qurna at all seasons of the year from Basra, but actually

seldom proceed farther north than Maqil, where all the berthing facilities exist. All river steamers can proceed up the Tigris during any season and also up the Euphrates as far as Kabaish (colloq. Chabaish), and beyond to upstream from Darraji, provided the channel through the Hor al Hammar is sufficiently dredged. The interior waterways of the marshes are, generally speaking, not navigable by any craft except *mashufs*.

Shatra.—Situated mostly on the right bank of the Shatt al Shatra, this town stands three miles downstream of the take-off of the Bada channel. The distance by road to An Nasiriya is about thirty-five miles. In 1920 the population was 5,500, including 5,160 Shiahs, 200 Persians, 120 Sunnis, 10 Jews, and 10 Mandeans (Subba). The majority of the houses were of burnt brick. The town, which is surrounded by a fortified wall eight feet high, with ruined towers at intervals of 400 yards, is divided by the Shatt al Shatra.

Almost every man of the Shiah inhabitants is connected with either the Sinajir or the Al bu Shamkhi sections of the Abuda. These two sections fought each other in 1917. The Al bu Shamkhi were beaten, their houses in the northern part of the town wrecked. By May, 1920, many of them had been rebuilt. According to local history, Shatra was founded about 1872. With the building of bazaars and houses it grew rapidly. A brisk trade with Baghdad and growth as a grain center made it into a "Little Baghdad," the most important town on the Shatt al Gharraf.

Suq ash Shuyukh.—This circular town stands among date palm groves on the right bank of the main Euphrates channel, one and one-half miles downstream from where the Akaika channel takes off. This channel was closed by means of a bund four miles down from the main river. In 1920 the town, which lies seventeen miles in a direct line southeast of An Nasiriya, had a population of 8,830, of which 5,000 lived in the town itself and 3,000 in the gardens immediately outside. About 800 Mandeans (Subba) lived on the left bank opposite the town. Prior to 1867, when An Nasiriya was built, Suq ash Shuyukh was the old Sadun capital of the Muntafiq. The town became divided into two antagonistic factions: the Hathar, who are Shiahs, consisting of two-thirds of the population, and the Najada, who are Sunnis.

Az Zubair.—Situated thirteen miles southwest of Basra, this town became one of the "Desert Ports" where the Beduin caravans called to replenish their stock of supplies and clothing. In this manner Az Zubair developed into a distributing center for the trade

between the western desert and Basra. In 1920 the population was about 12,000, all of whom were Sunnis.

The Desert and the Sown.—Probably in no other part of Iraq is the process of gradual change from the desert Arab to the settled cultivator, with the resultant disintegration of the tribal system, better exemplified than on the lower reaches of the Tigris from Kut al Imara to Khorram Shahr. It is well known that all tribes that migrated to Iraq did so with the intention of settling as cultivators on its fertile land, but in this respect none have taken to the land as much as these tribes of the Tigris, for the obvious reason that the country in which they settled is cut off from the Beduins and the semi-settled tribes of the Muntafiq by the Euphrates, while the foothills of Iran prohibit migrations.

The nomad, therefore, is not to be found in this area, and today the only tribe to retain any of its original characteristics is the semi-nomadic Bani Lam. They used to migrate across the border into Iran in search of grazing.

The remaining tribes are sedentary and dwell in villages of reed huts, some cultivating their crops and gardens, while others, who have settled in the marshes, breed buffaloes and make reed mats, which they sell to merchants of the neighboring towns.

Among these sedentary people there is a tendency to disregard their tribal ties and settle where cultivation is best. A rice grower cares little whether he works under an Al bu Muhammad, Azairij, or an Al Sawaad sheikh. To the south, at the junction of the Tigris and Euphrates, tribes such as the Nashwah and Muzaira have long cast off all connection with their original group and have named themselves after the place in which they have settled. On the left bank of the Shatt al Arab, between Al Qurna and Khorram Shahr, the greater part of the land is inhabited by the Al Muhaisin, a collection of foreign tribes that came there for the purpose of cultivation. Considering themselves subjects of the Sheikh of Muhammara, they attached themselves to the Al Muhaisin section of the Chaab, which they found there on their arrival. Although now known as the Al Muhaisin tribe, they are in reality no more than cultivators of the date gardens.

As far south as Qala Salih the lands are divided into estates (*mugata'as*), the sheikh of each being selected from the reigning family of the tribe in that particular district. Tribal policy is largely directed by these chiefs, who hold their office usually, but not of

necessity, through inheritance. The paramount sheikh no longer exists; the sheikhs hold themselves directly responsible to the Government.

III. THE PHYSICAL ANTHROPOLOGY OF THE AL BU MUHAMMAD, THE AL SAWAAD, AND THE SUBBA

Introduction.—The anthropometric methods and technique have been described in detail in the Iran Report (Field, 1939, pp. 287–289). It seems, however, desirable to republish the list of abbreviations employed in this chapter.

LIST OF ANTHROPOMETRIC ABBREVIATIONS

B=head breadth	Go-Go=bigonial breadth
B'=minimum frontal diameter	Go-Go/J=zygo-gonial index
B'/B=fronto-parietal index	G.O.L.=glabello-occipital length
B'/J=zygo-frontal index	J=bizygomatic breadth
B/L=cephalic index	L=glabello-occipital length
Big. B.=bigonial breadth	L.L.=lower limb length
Biz. B.=bizygomatic breadth	M.F.D.=minimum frontal diameter
C.I.=cephalic index	N.B.=nasal breadth
E.B.=ear breadth	N.H.=nasal height
EB/EL=ear index	NB/NH=nasal index
E.I.=ear index	N.I.=nasal index
E.L.=ear length	R.S.H.=relative sitting height
F.P.I.=fronto-parietal index	S.H.=sitting height
G.B.=greatest breadth	T.F.H.=total facial height
G.H.=total facial height	T.F.I.=total facial index
G'H=upper facial height	U.F.H.=upper facial height
GH/J=facial index	U.F.I.=upper facial index
G'H/J=upper facial index	Zyg.fr.I.=zygo-frontal index
	Zyg.go.I.=zygo-gonial index

This chapter will include the data obtained on the Al bu Muhammad, the Al Sawaad, and the Subba.

A detailed description of the life and customs of the Al bu Muhammad has also been prepared by Lady Drower (Chapter V). Miss Winifred Smeaton was not allowed to make anthropometric measurements on the women, but she was permitted to make a study of tattooing and its significance. Mr. Richard Martin took the photographs of the racial types as well as a large series depicting the life in these marshes.

Entomological specimens for Field Museum and for Rustam Agricultural Experimental Farm at Hinaidi near Baghdad were collected by Albert Meymourian, who was lent to the Expedition by the Department of Agriculture in Baghdad. Mr. Khedoory Muallim, who was attached to the Expedition by the Royal College of Medicine in Baghdad, prepared the bird skins. Mr. S. Y. Showket acted as our general assistant and interpreter, and Mr. Yusuf Lazar

collected the plants and some of the animals. In addition, the Chief of Police in Amara kindly sent ten policemen as escorts.

THE AL BU MUHAMMAD

In southern Iraq, both sides of the Tigris River are marshy. To the southeast of Amara and almost due east of Qala Salih lies the Hor al Hawiza, which covers the territory eastward as far as the Iraq-Iran boundary. Since we did not visit the western marsh we can deal only with the physical characters of the Al bu Muhammad tribesmen of the Hor al Hawiza, and with the Al Sawaad, who live near Halfaya. These two tribal groups, together with the Al Sudan, the Uzairij, and the Bani Lam, form the principal tribesmen of the eastern marshes.

The Al Sawaad live in the district south of Halfaya, north of the Sudan tribesmen. They are said to be darker in skin color and taller in stature than their neighbors.

The Bani Lam, a sheep-owning tribe, are still semi-nomadic. They have had constant feuds with the Al bu Muhammad, who are their equals in power and fame.

The Al bu Muhammad live beside the banks of the Chahala River and its main tributaries, the Az Zubair, the Adil, and the Taiah. They live also on islands scattered throughout the Hor al Hawiza and the Hor umr Sauan. These Marsh Arabs are often called *Madan*, which means that they are settled tribes and not nomads. The term, however, should apply only to the Marsh Arabs (Muntafiq) living to the west and southwest of Amara. The Al bu Muhammad are cultivators, fishermen, hunters, and makers of reed mats, which they use for the construction of their houses and as articles of commerce. They are one of the most powerful tribes of the Tigris. According to their own account they are descended from the Zubaid, who dwell beside the Tigris below Baghdad. An ancestor named Muhammad, from whom they take their name, migrated from the Zubaid district to the Hafira Canal opposite Qala Salih ten generations ago. The tribe has since expanded over the canals and marshes on either side of the Tigris between Amara and Al Uzair (Ezra's Tomb).

Muhammad found a small tribe called Al Furaijat in this district. The Sheikh of the Furaijat married Muhammad's sister and Muhammad married the Sheikh's daughter, whose three sons, Amla, Abbud, and Shudaiyid, gave rise to the present three sections of the Al bu Muhammad: Al Amla, Al Abbud, and Al Shadda.

The Al Amla is frequently known as the Al bu Muhammad Section, because it is the senior of the three. Within this Section are the four ruling families (*Baits*)¹ of the Al bu Muhammad, namely, the *Baits* Wadi, Khalifah, Yasir, and Saihud.

There has always been some confusion between *Baits* and Sections. *Baits* refer to families or houses. Originally the three houses of Muhammad's sons were called *Baits*. Eventually as the families increased, the original *Baits* became known as Sections and the ruling house as a *Bait*, named after the father or grandfather of the local sheikh. Confusion of the two terms developed when the Al Amla Section was called *Bait* Chuwaimil after a distinguished great-grandson of Muhammad. At one period the ruling house of this Section was named after him. Descended from Chuwaimil were the four important sheikhs: Wadi, Khalifah, Yasir, and Saihud. *Bait* Chuwaimil was therefore divided into four *Baits*, from which are descended the present ruling houses of the Al bu Muhammad and all of the Al Amla Section. These *Baits* were named after the sheikhs, the name *Bait* Chuwaimil thus ceasing to exist except as a former ruling house of the Al Amla Section.

From this it will be seen that the Al Amla Section contains the royal house of the Al bu Muhammad and for that reason has sometimes been called the Al bu Muhammad Section, while the other two Sections, whose descendants are unknown, have retained their original names, their Sub-sections only being called after the sons of Abbud and Shudaiyid.

The members of the Al Amla Section cultivate the rich rice lands at the tails of the canals. They do not move beyond their tribal district, but within its limits they transfer freely from one farm to another.

The Al Abbud are also mainly cultivators, scattered throughout the territory of the Al bu Muhammad. They intermingle with the Al Amla Section and the tribesmen work side by side.

The Al Shadda, chiefly marshmen of no settled habitation, live among the marshes between Qala Salih and Al Uzair. They do not mingle with the other Sections and are occupied in breeding buffaloes and making reed mats.

In addition, many Sections of foreign tribes have become subjects of the Al bu Muhammad. These tribes live and work with

¹ The plural has been anglicized for the sake of convenience. In Arabic the plural is pronounced "beaut," as in beauty.

both the Al Amla and the Al Abbud, but have attached themselves to the former.

Vital Statistics and Age.—Despite the inherent difficulties in attempting to obtain figures relating to the size of families, the Al bu Muhammad tribesmen disclose these data more readily than other groups in Iraq.

VITAL STATISTICS

Brothers	No.	Per cent	Sisters	No.	Per cent
None.....	32	16.93	None.....	54	28.57
1.....	48	25.40	1.....	38	20.11
2.....	71	37.57	2.....	50	26.46
3-4.....	29	15.34	3-4.....	36	19.05
5-6.....	6	3.17	5-6.....	10	5.29
7 or more.....	3	1.59	7 or more.....	1	0.53
Total.....	189	100.00	Total.....	189	100.01

Sons	No.	Per cent	Daughters	No.	Per cent
None.....	49	38.89	None.....	50	40.00
1.....	29	23.02	1.....	42	33.60
2.....	21	16.67	2.....	18	14.40
3-4.....	24	19.05	3-4.....	11	8.80
5-6.....	2	1.56	5-6.....	3	2.40
7 or more.....	1	0.80	7 or more.....	1	0.80
Total.....	126	99.99	Total.....	125	100.00

AGE DISTRIBUTION

Age	No.	Per cent	Age	No.	Per cent
18-19.....	4	1.82	45-49.....	8	3.64
20-24.....	40	18.18	50-54.....	9	4.09
25-29.....	33	15.00	55-59.....	6	2.73
30-34.....	52	23.64	60-64.....	2	0.91
35-39.....	39	17.73	65-69.....	3	1.36
40-44.....	23	10.45	70-x.....	1	0.45
			Total.....	220	100.00

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD TRIBESMEN

Skin.—The color was darker than that of the average Arab of the Kish area. Individually it ranged from that of a typical southern European to very dark brown. The constant exposure to the weather combined with the intense reflection of the sun off the water darkened the skin. Furthermore, while poling their vessels through the marshes their bodies were semi-naked, often nude, so that they became tanned through constant sunburn.

Nos. 894 and 938 had very dark skins. Nos. 914, 925, and 930 possessed dark skins, in addition to Nos. 747, 752, 794, 797, 805, 843, 901, all of whom had Negro blood. Both Mongoloid and Negroid

blood were evidenced in Nos. 797 and 833. No. 894 had typical Marsh Arab features but distinct Negroid blood in his very dark brown skin color, curly-frizzly hair, and lip characteristics: integumental, double plus, membranous, plus, and lip seam, plus.

Hair.—Head hair was very abundant. However, abnormal hairiness of the body was not recorded, and the general impression retained was that these Al bu Muhammad tribesmen possessed less than the average amount of body hair observed on the Arabs of the Kish area or on the Dulaimis.

HAIR					
Color	No.	Per cent	Form	No.	Per cent
Black.....	39	21.79	Straight.....	0	.....
Very dark brown.....	17	9.50	Very low waves....	2	1.10
Dark brown.....	92	51.40	Low waves.....	164	90.61
Brown.....	0	.....	Deep waves.....	5	2.76
Reddish brown.....	0	.....	Curly-frizzly.....	10	5.52
Light brown.....	1	0.56	Woolly.....	0	.....
Red.....	0	.....		
Black and gray.....	4	2.23	Total.....	181	99.99
Dark brown and gray..	25	13.97			
Light brown and gray..	0	.....	Texture	No.	Per cent
Gray.....	1	0.56	Coarse.....	35	18.82
White.....	0	.....	Medium coarse.....	4	2.15
Total.....	179	100.01	Medium.....	139	74.73
			Medium fine.....	4	2.15
			Fine.....	4	2.15
			Total.....	186	100.00

Eyes.—The majority of the individuals had blue-brown eyes. In these cases the pigmentation was brown but there was a definite element of blue color present. This was not due to *arcus senilis*, although the concentration of blue color was generally present in an outer ring.

In No. 820 the blue ring was almost absent and in No. 841 the color effect of the blue-brown was blue. Nos. 901 and 947 had sharply delineated blue-ringed eyes.

Twenty-two individuals had *blue*-brown eyes. These men had brown eyes with a marked blue element not only as an outer ring but also throughout the iris. Of these, in No. 801 blue predominated, with the remainder a light green. No. 764 had exceptionally light *blue*-brown eyes. Six individuals (3.18 per cent) had green-brown eyes; No. 832 was also blue-ringed. No. 745 had light brown eyes, No. 774 blue-gray, and No. 949 blue-green. Only six individuals (3.18 per cent), Nos. 843, 845, 849, 910, 944, and 950, had dark brown eyes.

Half of the group possessed homogeneous irides, the remainder being either zoned (36.26 per cent) or rayed (14.29 per cent). Since there were so many mixed eyes this high percentage of homogeneous irides seems most improbable and should therefore not be taken as correct. The majority (88.65 per cent) of the sclera were clear.

			EYES		
Color	No.	Per cent	Iris	No.	Per cent
Black.....	0	.....	Homogeneous.....	90	49.45
Dark brown.....	6	3.18	Rayed.....	26	14.29
Blue-brown.....	152	80.42	Zoned.....	66	36.26
Blue-brown.....	22	11.64			
Green-brown.....	6	3.18	Total.....	182	100.00
Green-brown.....	0	.....		
Gray-brown.....	0	.....	Sclera		
Blue.....	0	.....		No.	Per cent
Gray.....	0	.....	Clear.....	164	88.65
Light brown.....	1	0.53	Yellow.....	1	0.54
Blue-gray.....	1	0.53	Speckled.....	10	5.41
Blue-green.....	1	0.53	Bloodshot.....	9	4.86
			Speckled and bloodshot...	1	0.54
Total.....	189	100.01	Speckled and yellow.....	0	.....
			Yellow and bloodshot.....	0	.....
			Total.....	185	100.00

The eyes, or more properly the eye-slits, were horizontal as in Europeans.

The average condition of the eyes was considerably better than that of the Arabs of the Kish area but not up to the standard of the members of the Iraq Army, studied at Hilla in 1928. There was only one case of total blindness, No. 736; three, Nos. 779, 814, and 823, were blind in the left eye. No. 836 had poor eyes, with a cataract in his left eye. Both eyes were very poor in Nos. 735 and 907, and poor in Nos. 855, 871, and 937. The left eye of No. 773 appeared normal, but the right eye was almost closed and his vision was poor. Nos. 778 and 870 had the right eye out of alignment; both eyes of No. 778 were poor. No. 895 was slightly cross-eyed and had a poor right eye while No. 845 had a poor left eye.

Nose.—On the basis of my Iran report, the nose form suggests the presence of two racial elements: the straight-nosed Iraquo-Mediterranean dolichocephal and the convex-nosed Iranian Plateau dolichocephal. When the geographical position of the Hor al Hawiza is taken into account, this blending of Mediterranean racial types is to be expected.

The men with flaring alae possessed Negro blood. Three men (Nos. 930, 938, and 942) had double plus, and three (Nos. 820, 821, and 935) had nasal tips.

NOSE

Profile	No.	Per cent	Wings	No.	Per cent
Wavy.....	3	1.60	Compressed.....	23	12.30
Straight.....	106	56.38	Compressed-medium....	19	10.16
Concave.....	6	3.19	Medium.....	90	48.13
Convex.....	65	34.57	Medium flaring.....	42	22.46
Concavo-convex...	8	4.26	Flaring.....	13	6.95
Total.....	188	100.00	Flaring plus.....	0	.....
			Total.....	187	100.00

Mouth.—Five men (Nos. 833, 840, 859, 894, and 901) had double plus lip eversion.

Teeth and Musculature.—While Nos. 813 and 815 had very uniform teeth, Nos. 834 and 806 had irregular front teeth. No. 809 had two large front teeth. No. 878 had his left upper incisor missing. In No. 856 the lower front teeth showed considerable wear.

TEETH

Bite	No.	Per cent	Condition	No.	Per cent
Under.....	0	.....	Very bad.....	2	2.38
Edge to edge.....	0	.....	Bad.....	7	8.33
Slight over.....	17	9.19	Fair.....	9	10.71
Marked over.....	168	90.81	Good.....	34	40.48
Total.....	185	100.00	Excellent.....	32	38.10
			Total.....	84	100.00

MUSCULATURE

	No.	Per cent
Poor.....	4	2.13
Fair.....	13	6.91
Average.....	0	.....
Good.....	154	81.91
Excellent.....	17	9.04
Total.....	188	99.99

Branding Scars.—No. 946 had a scar (*chawi* or *kawi*) on the outside of the right forearm, where a spear-wound had been inflicted during a fight. The branding stopped the bleeding. No. 811 had a scar on the right wrist and No. 823 had three on the right arm. Nos. 821 and 891 each had a large scar on the left temple.

Tattooing.—Only twenty-five of the tribesmen examined were not tattooed.

TATTOOING

	No.	Per cent
None.....	25	13.81
Some.....	150	82.87
Extensive.....	6	3.31
Total.....	181	99.99

Henna.—No. 946 had henna on his hands and nails because he had been married two weeks before.

Health.—Only twelve men (6.39 per cent) were recorded as being in fair or poor health.

Health	No.	Per cent
Poor.....	3	1.60
Fair.....	9	4.79
Average.....	0
Good.....	170	90.43
Excellent.....	6	3.19

Total.....	188	100.01
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Disease	No.	Per cent
Smallpox.....	18	54.55
Fever.....	0
Headache.....	1	3.03
Stomach pain.....	1	3.03
Scalp.....	11	33.33
Cataract.....	1	3.03
Trachoma.....	0
Baghdad boil.....	1	3.03
Chicken pox.....	0

Total.....	33	100.00
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Special Observations.—No. 859 had a pronounced supraorbital torus combined with considerable prognathism.

SUMMARY

The statistics compiled on 221 members of the Al bu Muhammad tribe reveal that the majority possessed dark hair, medium to coarse in texture, with low waves. The eyes were brown, often with an outer bluish ring. The sclera were clear while the iris varied in character. The nose was straight but there was a concavo-convex element in the population. The nasal wings showed considerable variation although the majority were in the medium-compressed group. Among the individuals observed the average age was 34.04 years while the greatest number came within the 20-40 age groups.

STATISTICAL ANALYSES OF AL BU MUHAMMAD TRIBESMEN

Stature and Sitting Height.—Average stature (220 men) was 166.71 (range 143.0-187.0). These dwellers in the marshes east of Amara were slightly taller than the average for Southwestern Asia. Seventy-three tribesmen were unusually tall. No. 806 was omitted.

STATURE					
Harvard System	No.	Per cent	Keith System	No.	Per cent
Short (x-160.5).....	29	13.18	Short (x-159.9).....	25	11.36
Medium (160.6-169.4) .	118	53.63	Medium (160.0-169.9) .	126	57.27
Tall (169.5-x).....	73	33.18	Tall (170.0-179.9).....	66	30.00
			Very tall (180.0-x).....	3	1.36
Total.....	220	99.99	Total.....	220	99.99

SITTING HEIGHT (Trunk Length)		
Group	No.	Per cent
Very short (x-74.9).....	1	0.46
Short (75.0-79.9).....	2	0.91
Medium (80.0-84.9).....	41	18.72
Long (85.0-89.9).....	116	52.97
Very long (90.0-x).....	59	26.94
Total.....	219	100.00

Head Measurements and Indices.—The minimum frontal diameter (mean 113.02) and the head breadth (mean 145.75) were wide. The minimum frontal diameter seems to be unusually large and should probably be reduced by at least 2 mm. In the two very narrow groups there was only one individual.

MINIMUM FRONTAL DIAMETER		
Group	No.	Per cent
Very narrow (x-99).....	0	.....
Narrow (100-109).....	49	22.17
Wide (110-119).....	157	71.04
Very wide (120-x).....	15	6.79
Total.....	221	100.00

HEAD BREADTH		
Group	No.	Per cent
Very narrow (120-129).....	1	0.45
Narrow (130-139).....	32	14.48
Wide (140-149).....	129	58.37
Very wide (150-x).....	59	26.70
Total.....	221	100.00

CEPHALIC INDEX					
Harvard System	No.	Per cent	Keith System	No.	Per cent
Dolichocephalic.....	81	36.65	Ultradolichocephalic... (x-70.0)	3	1.36
(x-76.5)			Dolichocephalic.....	45	20.36
Mesocephalic.....	116	52.49	(70.1-75.0)		
(76.6-82.5)			Mesocephalic.....	117	52.94
Brachycephalic.....	24	10.86	(75.1-79.9)		
(82.6-x)			Brachycephalic.....	48	21.72
			(80.0-84.9)		
Total.....	221	100.00	Ultrabrachycephalic... (85.0-x)	8	3.62
			Total.....	221	100.00

The mean cephalic index was 77.94 (with range 68-88). While both groupings of cephalic indices include about half of the series as mesocephals, the threefold and fivefold classifications show considerable divergence. The three (1.36 per cent) ultradolichocephals ($x-70.0$) show a remarkable variation in head form within this group, indicating a stock composed of at least two elements.

Facial Measurements and Indices.—The bizygomatic breadth was medium narrow (mean 135.45) and the bigonial breadth was extremely narrow (mean 104.94). Since the breadth of the head and forehead was wide, the face tended to be ovoid or triangular. The upper part of the facial length (mean 70.55) showed extreme variation. The total facial height (mean 121.75) follows a similar frequency pattern.

FACIAL MEASUREMENTS AND INDICES

Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short..... ($x-63$)	15	6.79	Short..... ($x-109$)	10	4.52
Medium short..... (64-69)	79	35.75	Medium short..... (110-119)	66	29.86
Medium long..... (70-75)	88	39.82	Medium long..... (120-129)	119	53.85
Long..... (76- x)	39	17.65	Long..... (130- x)	26	11.76
Total.....	221	100.01	Total.....	221	99.99

Total facial index	No.	Per cent
Euryprosopic ($x-84.5$).....	31	14.03
Mesoprosopic (84.6-89.4).....	71	32.13
Leptoprosopic (89.5- x).....	119	53.85
Total.....	221	100.01

Nasal Measurements and Indices.—The nose was short (mean 52.98) and narrow (mean 34.85) with an index of 66.02.

NASAL MEASUREMENTS AND INDICES

Nasal height	No.	Per cent	Nasal width	No.	Per cent
Short..... ($x-49$)	55	24.89	Very narrow..... ($x-29$)	9	4.07
Medium..... (50-59)	148	66.97	Medium narrow..... (30-35)	125	56.56
Long..... (60- x)	18	8.14	Medium wide..... (36-41)	76	34.39
Total.....	221	100.00	Wide..... (42- x)	11	4.98
			Total.....	221	100.00

UPPER FACIAL LENGTH

	x-63		64-69		70-75		76-81		82-x		Totals	
Total facial length	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
x-109.....	2	0.91	7	3.18	1	0.45	0	....	0	....	10	4.54
110-119.....	11	5.00	36	16.36	15	6.82	4	1.82	0	....	66	30.00
120-129.....	2	0.91	35	15.91	62	28.18	16	7.27	4	1.82	119	54.09
130-x.....	0	....	1	0.45	10	4.55	11	5.00	3	1.36	25	11.36
											220	99.99

NASAL BREADTH

	x-29		30-35		36-41		42-x		Totals	
Nasal length	No.	%	No.	%	No.	%	No.	%	No.	%
x-49.....	2	0.91	30	13.64	20	9.09	2	0.91	54	24.55
50-59.....	7	3.18	87	39.55	46	20.91	8	3.64	148	67.28
60-x.....	0	....	8	3.64	9	4.09	1	0.45	18	8.18
									220	100.01

MEASUREMENTS AND INDICES OF AL BU MUHAMMAD TRIBESMEN

Measurements	No.	Range	Mean	S.D.	C.V.
Age.....	220	18-70	34.05±0.48	10.50±0.34	30.84±0.99
Stature.....	220	143-187	166.71±0.29	6.36±0.20	3.82±0.12
Sitting height.....	219	72-98	87.79±0.18	3.84±0.12	4.37±0.14
Head length.....	221	167-205	187.26±0.26	5.82±0.19	3.11±0.10
Head breadth.....	221	126-164	145.75±0.26	5.76±0.18	3.95±0.13
Minimum frontal diameter.....	221	101-124	113.02±0.20	4.44±0.14	3.93±0.13
Bizygomatic diameter.....	221	120-149	135.45±0.23	5.05±0.16	3.73±0.12
Bigonial diameter.....	221	86-129	104.94±0.26	5.76±0.18	5.49±0.18
Total facial height.....	221	100-144	121.75±0.30	6.55±0.21	5.38±0.17
Upper facial height.....	221	50-89	70.55±0.24	5.35±0.17	7.58±0.24
Nasal height.....	220	40-71	52.98±0.23	5.00±0.16	9.44±0.30
Nasal breadth.....	220	25-51	34.85±0.17	3.75±0.12	10.76±0.35
Ear length.....	221	44-75	58.98±0.25	5.52±0.18	9.36±0.30
Ear breadth.....	221	23-43	32.19±0.14	3.06±0.10	9.51±0.31
Indices					
Relative sitting height	219	48-57	52.78±0.07	1.64±0.05	3.11±0.10
Cephalic.....	221	68-88	77.94±0.17	3.69±0.12	4.73±0.15
Fronto-parietal.....	221	69-86	77.62±0.14	3.18±0.10	4.10±0.13
Zygo-frontal.....	221	72-95	83.26±0.14	3.00±0.10	3.60±0.12
Zygo-gonial.....	221	63-92	77.35±0.18	3.99±0.13	5.16±0.17
Total facial.....	221	75-109	90.05±0.25	5.45±0.17	6.05±0.19
Upper facial.....	221	43-66	52.13±0.18	4.05±0.13	7.77±0.25
Nasal.....	220	44-95	66.02±0.42	9.16±0.29	13.87±0.45
Ear.....	221	37-76	55.02±0.27	5.92±0.19	10.76±0.35

VITAL STATISTICS* OF AL BU MUHAMMAD TRIBESMEN

Number	Age	Married	Sons	Daughters	Brothers	Sisters
764	40	1	3, 1	1, 0	1, 1	3, 0
765	25	1	0, 0	0, 0	2, 0	2, 0
766	30	1	0, 0	0, 1	2, 1	3, 0
767	35	2	4, 0	2, 0	1, 1	2, 0
768	25	0	....	....	2, 1	3, 0
769	35	1	1, 1	1, 0	2, 1	2, 0
770	35	1	2, 1	0, 0	0, 0	1, 0
771	30	1	1, 1	0, 0	0, 3	3, 2
772	22	0	....	....	2, 0	1, 0
773	33	1	1, 0	2, 0	1, 1	0, 0
774	25	0	....	....	2, 0	2, 3
775	35	1	2, 0	0, 0	2, 0	2, 0
776	30	1	1, 0	0, 2	3, 0	2, 0
777	40	1	0, 0	4, 1	3, 0	2, 0
778	35	1	1, 0	1, 1	2, 0	3, 0
779	20	0	....	....	0, 1	0, 1
780	20	0	....	....	1, 0	0, 1
781	35	0	....	....	1, 0	0, 0
782	20	0	....	....	2, 0	2, 0
783	35	1	2, 1	1, 0	2, 0	4, 0
784	30	1	1, 0	0, 0	2, 0	1, 0
785	50	1	2, 0	1, 0	2, 0	3, 0
786	25	0	....	....	2, 0	0, 0
787	25	0	....	....	1, 0	0, 0
788	45	1	2, 0	1, 0	2, 0	0, 0
789	33	1	0, 0	0, 0	1, 0	1, 0
790	20	0	....	....	0, 0	2, 0
791	30	1	0, 0	1, 0	1, 0	2, 0
792	30	0	....	....	0, 1	2, 0
793	30	1	1, 0	0, 1	1, 1	3, 2
794	32	1	0, 0	0, 0	1, 0	1, 0
795	30	1	0, 0	0, 0	3, 0	1, 0
796	35	1	1, 0	0, 0	1, 0	0, 0
797	22	0	....	....	2, 0	0, 0
798	35	1	1, 0	1, 0	2, 0	3, 0
799	33	0	....	....	0, 0	0, 0
800	30	1	0, 0	2, 0	2, 0	0, 0
801	23	0	....	....	2, 0	0, 0
802	35	1	0, 0	0, 2	2, 0	3, 0
803	25	1	1, 0	0, 0	0, 0	0, 0
804	50	0	....	....	1, 0	1, 2
805	35	1	2, 2	1, 0	1, 0	1, 0
806	25	0	....	....	0, 0	0, 0
807	35	1	0, 0	1, 0	2, 0	2, 0
808	35	1	5, 3	1, 3	1, 0	0, 0
809	40	1	2, 2	2, 2	0, 0	0, 2
810	32	1	0, 0	0, 0	0, 1	0, 1
811	40	1	1, 0	2, 0	2, 3	3, 2

* Italicized numbers refer to deceased relatives.

VITAL STATISTICS* OF AL BU MUHAMMAD TRIBESMEN

Number	Age	Married	Sons	Daughters	Brothers	Sisters
812	35	1	2, 1	1, 0	2, 0	1, 1
813	18	0	....	....	2, 0	2, 1
814	34	1	0, 0	1, 0	1, 0	1, 0
815	22	0	....	....	2, 0	0, 0
816	25	1	0, 0	1, 0	2, 1	0, 0
817	20	1	....	....	2, 0	2, 0
818	22	0	....	....	2, 1	0, 3
819	32	1	0, 0	1, 0	0, 0	0, 0
820	35	1	2, 0	1, 1	0, 2	2, 0
821	32	1	0, 0	1, 0	2, 1	1, 1
822	65	1	2, 3	0, 0	1, 4	0, 4
823	46	1	1, 3	1, 3	1, 0	2, 0
824	40	1	1, 1	1, 0	0, 0	1, 1
825	35	1	1, 0	0, 0	1, 5	1, 2
826	40	1	0, 0	0, 0	0, 2	1, 1
827	40	1	1, 0	1, 1	1, 1	1, 3
828	20	0	....	....	2, 0	2, 0
829	22	0	....	....	1, 0	0, 0
830	30	0	....	....	0, 0	2, 0
831	40	1	2, 0	0, 0	1, 0	2, 0
832	20	0	....	....	2, 0	1, 0
833	20	0	....	....	1, 0	0, 0
834	35	1	0, 0	0, 0	2, 0	1, 0
835	35	1	0, 0	0, 0	0, 0	2, 0
836	55	1	2, 2	1, 0	2, 2	1, 2
837	55	1	2, 2	1, 2	1, 2	2, 1
838	23	1	1, 0	0, 1	3, 1	2, 3
839	40	1	4, 0	0, 0	2, 0	3, 1
840	25	0	....	....	1, 1	1, 1
841	30	1	1, 0	0, 1	0, 1	0, 1
842	20	0	....	....	2, 0	1, 1
843	35	1	2, 0	1, 0	2, 0	0, 0
844	30	1	1, 0	0, 0	0, 0	1, 0
845	25	0	....	....	1, 0	1, 0
846	40	1	1, 2	1, 0	1, 4	1, 0
847	45	1	0, 0	1, 0	2, 0	1, 0
848	35	1	1, 0	1, 0	1, 0	0, 0
849	40	1	3, 0	1, 2	1, 0	2, 0
850	20	0	....	....	2, 0	1, 0
851	20	0	....	....	3, 0	2, 0
852	55	1	2, 0	0, 0	1, 0	0, 0
853	28	1	2, 0	1, 0	1, 0	0, 0
854	20	0	....	....	1, 1	1, 0
855	45	1	2, 0	0, 0	1, 0	1, 0
856	50	1	4, 0	4, 0	1, 1	2, 0
857	20	0	....	....	3, 0	3, 0
858	30	1	1, 0	1, 0	1, 0	2, 0
859	28	1	2, 0	0, 2	1, 1	2, 0

* Italicized numbers refer to deceased relatives.

VITAL STATISTICS* OF AL BU MUHAMMAD TRIBESMEN

Number	Age	Married	Sons	Daughters	Brothers	Sisters
860	20	1	0, 0	1, 0	2, 0	2, 0
861	25	1	1, 0	2, 0	1, 1	4, 2
862	22	0	....	....	1, 2	0, 0
863	22	0	....	....	2, 0	0, 0
864	30	0	....	....	1, 0	1, 0
865	25	0	....	....	2, 0	2, 0
866	35	0	....	....	3, 0	2, 0
867	30	0	....	....	1, 1	2, 0
868	35	1	0, 0	0, 0	2, 1	2, 0
869	38	1	0, 0	0, 0	1, 0	2, 0
870	30	1	0, 0	1, 0	2, 0	2, 0
871	35	1	0, 0	1, 0	2, 0	1, 0
872	27	0	....	....	0, 2	2, 3
873	35	1	1, 2	2, 0	0, 0	1, 0
874	25	1	0, 0	0, 0	2, 0	1, 0
875	55	1	0, 2	1, 3	0, 1	0, 0
876	35	1	0, 0	0, 0	2, 0	0, 0
877	30	0	....	....	1, 0	0, 1
878	30	1	0, 0	0, 0	1, 0	0, 0
879	25	0	....	....	2, 0	0, 0
880	56	1	1, 3	0, 4	0, 2	0, 2
881	20	0	....	....	2, 0	2, 0
882	27	1	1, 0	0, 0	1, 3	0, 0
883	35	1	1, 0	0, 1	0, 1	3, 0
884	25	0	....	....	2, 0	4, 0
885	20	1	0, 0	0, 0	2, 1	1, 0
886	40	2	1, 1	1, 10	1, 1	3, 0
887	22	0	....	....	3, 2	2, 0
888	35	1	0, 0	0, 0	1, 4	0, 0
889	50	1	1, 2	2, 2	1, 2	0, 1
890	30	0	....	....	0, 10	0, 5
891	40	1	2, 0	0, 2	0, 0	3, 0
892	25	0	....	....	1, 1	2, 2
893	20	1	2, 0	0, 0	3, 1	2, 0
894	35	1	0, 3	1, 3	1, 6	4, 6
895	35	0	....	....	2, 0	0, 0
896	50	1	2, 0	0, 5	2, 0	4, 0
897	33	1	2, 0	2, 0	1, 0	3, 0
898	23	0	....	....	1, 0	2, 3
899	25	0	....	....	2, 1	1, 1
900	25	0	....	....	1, 1	2, 3
901	35	3	4, 1	2, 1	1, 2	2, 1
902	33	0	....	....	1, 0	2, 2
903	35	1	1, 0	0, 0	1, 0	0, 0
904	35	1	0, 0	2, 0	1, 1	4, 0
905	20	0	....	....	0, 0	1, 0
906	20	1	0, 0	1, 0	2, 0	0, 0
907	65	1	1, 3	1, 0	0, 2	0, 0

* Italicized numbers refer to deceased relatives.

VITAL STATISTICS* OF AL BU MUHAMMAD TRIBESMEN

Number	Age	Married	Sons	Daughters	Brothers	Sisters
908	30	0	....	....	1, 0	0, 0
909	28	1	0, 0	1, 0	2, 0	1, 1
910	25	0	....	....	3, 0	3, 0
911	18	0	....	....	0, 0	2, 0
912	18	0	....	....	0, 0	2, 0
913	25	1	0, 0	0, 0	0, 0	0, 0
914	30	0	....	....	0, 2	0, 0
915	18	0	....	....	0, 0	0, 0
916	40	1	0, 0	1, 0	0, 1	0, 1
917	45	1	0, 0	1, 0	0, 0	0, 0
918	23	1	0, 0	0, 0	0, 0	0, 0
919	40	1	0, 0	1, 0	0, 0	0, 0
920	65	1	1, 3	0, 0	0, 0	0, 0
921	20	0	....	....	0, 0	0, 0
922	20	0	....	....	0, 0	1, 0
923	40	0	....	....	0, 0	0, 0
924	40	1	1, 0	0, 0	0, 0	0, 0
925	20	0	....	....	1, 0	0, 0
926	40	1	0, 0	0, 0	0, 0	0, 0
927	30	0	....	....	0, 0	0, 0
928	30	1	0, 0	1, 0	0, 0	0, 0
929	35	1	1, 0	0, 0	0, 0	0, 0
930	60	1	1, 0	2, 0	1, 0	1, 0
931	40	1	0, 0	0, 0	0, 0	0, 0
932	55	0	....	....	0, 0	0, 0
933	50	1	1, 2	2, 3	2, 0	1, 0
934	45	1	1, 2	2, 0	2, 0	1, 0
935	35	1	0, 0	0, 0	1, 0	0, 0
936	33	1	0, 0	0, 0	1, 2	1, 2
937	40	1	4, 0	1, 0	2, 0	2, 0
938	40	1	1, 0	1, 0	4, 0	2, 0
939	30	1	0, 0	0, 0	2, 0	4, 0
940	30	1	0, 0	0, 0	4, 3	2, 0
941	45	1	1, 0	0, 0	2, 0	1, 0
942	50	1	2, 0	1, 0	1, 0	1, 0
943	30	1	1, 0	0, 0	1, 0	0, 0
944	20	0	....	....	1, 0	3, 0
945	40	2†	2, 0	3, 0	3, 1	0, 2
946	25	2	1, 0	0, 0	2, 0	1, 0
947	30	1	1, 0	0, 0	1, 0	3, 0
948	28	1	0, 0	2, 0	1, 0	1, 1
949	45	1	3, 0	1, 0	0, 0	4, 0
950	23	0	....	....	2, 0	2, 0
951	20	0	....	....	1, 0	0, 0
952	35	1	1, 0	1, 0	1, 0	3, 0
953	32	1	0, 0	0, 0	3, 0	1, 0

* Italicized numbers refer to deceased relatives.

† No. 945 had two sons and two daughters by his first wife.

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
733	22	1710	942	188	151	118	142	102	122	82	60	35
734	30	1700	892	186	151	111	138	103	124	73	57	33
735	70	1656	827	182	144	115	138	98	122	73	59	33
736	60	1630	829	193	135	108	139	98	124	83	59	33
737	30	1697	890	183	142	108	131	104	115	63	..	..
738	30	1730	892	199	143	113	133	104	133	74	51	33
739	20	1673	865	184	143	109	133	108	128	75	52	30
740	30	1656	880	178	154	114	143	108	127	73	56	33
741	25	1680	850	183	152	109	135	107	125	73	57	35
742	25	1757	895	187	155	111	142	110	125	76	61	36
743	30	1758	915	186	152	106	140	110	119	74	54	36
744	40	1697	880	184	146	107	135	101	107	65	49	39
745	35	1727	900	184	154	118	140	102	121	69	53	39
746	..	1660	901	191	146	115	140	113	121	73	52	26
747	30	1684	875	188	149	110	133	109	121	72	48	38
748	30	1683	875	187	142	115	134	106	133	76	55	35
749	35	1655	885	192	138	115	134	96	132	71	46	36
750	30	1758	941	194	158	123	146	104	137	87	68	39
751	50	1597	871	183	144	117	134	97	127	79	57	37
752	25	1660	895	192	150	112	136	104	123	72	55	40
753	30	1710	905	192	150	108	136	107	128	74	62	38
754	25	1751	895	200	151	117	136	110	133	77	58	36
755	30	1660	866	185	145	111	138	105	131	74	55	32
756	50	1625	858	197	150	120	138	102	131	77	58	40
757	30	1537	825	186	144	114	134	101	121	68	50	37
758	30	1660	880	188	139	113	133	108	124	73	54	30
759	35	1717	930	187	149	116	137	102	122	72	52	40
760	30	1712	887	189	152	109	136	100	127	71	50	34
761	20	1623	831	189	138	104	125	103	120	54	45	29
762	25	1625	837	186	147	113	137	98	124	76	54	34
763	25	1668	875	187	154	118	143	105	133	73	56	31
764	40	1750	905	188	162	124	148	103	118	71	55	36
765	25	1540	825	187	145	114	133	100	119	64	49	37
766	30	1613	887	173	142	108	130	100	125	72	57	36
767	35	1762	915	191	143	116	133	107	122	74	52*	41*
768	25	1682	900	183	137	110	127	97	119	67	46	33
769	35	1670	879	173	128	110	128	101	117	65	52	32
770	35	1647	827	189	148	110	136	110	111	60	47	38
771	30	1672	857	187	140	110	125	99	122	74	55	34
772	22	1617	838	176	150	108	133	97	123	76	57	35
773	33	1630	860	182	134	107	129	97	117	68	48	33
774	25	1610	882	181	153	115	140	114	117	71	55	34
775	35	1795	965	191	150	118	137	108	118	69	47	34
776	30	1830	937	194	153	122	147	126	129	72	54	37
777	40	1652	862	183	154	113	143	108	117	67	56	28
778	35	1595	857	186	142	107	131	104	123	71	44	37
779	20	1600	819	191	144	108	134	99	108	60	43	33
780	20	1653	847	167	145	105	131	103	116	73	58	33
781	35	1710	925	188	138	105	130	100	123	71	55	35
782	20	1644	855	187	147	110	137	101	118	67	51	31
783	35	1673	883	184	147	107	142	111	133	68	48	36
784	30	1670	905	185	137	108	131	106	115	70	51	34
785	50	1640	857	191	151	111	136	115	124	74	58	35
786	25	1717	877	191	144	113	133	110	117	65	47	36
787	25	1622	825	188	144	108	128	100	122	68	46	35

*Should be omitted because of broken nose.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
733	54	34	55.1	80.3	78.2	85.9	57.8	58.3	62.9	71.8	83.1
734	67	34	52.5	81.2	73.5	89.9	52.9	57.9	50.8	74.6	80.4
735	71	34	50.0	79.1	79.9	88.4	52.9	55.9	47.9	71.0	83.3
736	73	38	50.9	69.9	80.0	89.2	59.7	55.9	52.1	70.5	77.7
737	57	33	52.4	77.6	76.1	87.8	48.1	....	57.9	79.4	82.4
738	64	33	51.6	71.9	79.0	100.0	55.6	64.7	51.6	78.2	85.0
739	54	30	51.7	77.7	76.2	96.2	56.4	57.7	55.6	81.2	82.0
740	61	32	53.1	86.5	74.0	88.8	51.0	58.9	52.5	75.5	79.7
741	61	30	50.6	83.1	71.7	92.6	54.1	61.4	49.2	79.3	80.7
742	56	31	50.9	82.9	71.6	88.0	53.5	59.0	55.4	77.5	78.2
743	58	34	52.0	81.7	69.7	85.0	52.9	66.7	58.6	78.6	75.7
744	58	38	51.9	79.4	73.3	79.3	48.2	79.6	65.5	74.8	79.3
745	65	34	52.1	83.7	76.6	86.4	49.3	73.6	52.3	72.9	84.3
746	54	34	54.3	76.4	78.8	86.4	52.1	50.0	63.0	80.7	82.1
747	58	30	52.0	79.3	73.8	91.0	54.1	79.2	51.7	82.0	82.7
748	66	36	52.0	75.9	81.0	99.3	56.7	63.6	54.6	79.1	85.8
749	66	37	53.5	71.9	83.3	98.5	53.0	78.3	56.1	70.2	85.8
750	64	36	53.5	81.4	77.9	93.8	59.6	57.4	56.3	71.2	84.3
751	74	40	54.5	78.7	81.3	94.8	59.0	64.9	54.1	72.4	87.3
752	53	31	53.9	78.1	74.7	90.4	52.9	72.7	58.5	76.5	82.4
753	54	33	52.9	78.1	72.0	94.1	54.4	61.3	61.1	78.7	79.4
754	53	31	51.1	75.5	77.5	97.8	56.6	62.1	58.5	80.9	86.0
755	54	38	52.2	78.4	76.6	94.9	53.6	58.2	70.4	76.1	80.4
756	63	34	52.8	76.1	80.0	94.9	55.8	69.0	54.0	73.9	87.0
757	64	34	53.7	77.4	79.2	90.3	50.8	74.0	53.1	75.4	85.1
758	64	34	53.0	73.9	81.3	93.2	54.9	55.6	53.1	81.2	85.0
759	52	34	54.2	79.7	77.9	89.1	52.6	76.9	65.4	74.5	84.7
760	56	31	51.8	80.4	71.7	93.4	52.2	68.0	55.4	73.5	80.2
761	64	31	51.2	73.0	75.4	96.0	43.2	64.4	48.4	82.4	83.2
762	54	30	54.6	79.0	76.9	90.5	55.5	62.9	55.6	71.5	82.5
763	51	34	52.5	82.4	76.6	93.0	51.0	55.4	66.7	73.4	82.5
764	68	33	51.7	86.2	76.5	79.7	48.0	65.5	48.5	69.6	83.8
765	60	33	53.6	77.5	78.6	89.5	48.1	75.5	55.0	75.2	85.7
766	60	33	55.0	82.1	76.1	96.2	55.4	63.2	55.0	76.9	83.1
767	64	33	51.9	74.9	81.1	91.7	55.6	78.9*	51.6	80.5	87.2
768	60	31	53.5	74.9	80.3	93.7	52.8	71.7	51.7	76.4	86.6
769	55	30	52.6	74.0	85.9	91.4	50.8	61.5	54.6	78.9	85.9
770	62	37	50.2	78.3	74.3	81.6	44.1	80.9	59.7	80.9	80.9
771	61	28	51.3	74.9	78.6	97.6	59.2	61.8	45.9	79.2	88.0
772	52	30	51.8	85.2	72.0	92.5	57.1	61.4	57.7	72.9	81.2
773	66	33	52.8	73.6	79.9	90.7	52.7	68.8	50.0	75.2	83.0
774	56	32	54.8	84.5	75.2	83.6	50.7	61.8	57.1	81.4	82.1
775	62	30	53.8	78.5	78.7	86.1	50.3	72.4	48.4	78.9	86.2
776	66	38	51.2	78.8	79.7	89.5	50.0	68.5	57.6	87.5	84.7
777	63	33	52.2	84.2	73.4	81.8	46.8	50.0	52.4	75.5	79.0
778	58	31	53.7	76.4	75.4	93.9	54.2	84.1	53.4	79.4	81.7
779	53	27	51.2	75.4	75.0	80.6	44.8	76.7	50.9	73.9	80.6
780	54	30	51.2	86.8	72.4	88.5	55.7	56.9	55.6	78.6	80.2
781	53	30	54.1	73.4	76.1	94.6	54.6	63.6	56.6	76.9	80.8
782	56	33	52.0	78.6	74.8	86.1	48.9	60.8	58.9	73.7	80.3
783	65	35	52.8	79.9	72.8	93.7	47.9	75.0	53.8	78.2	75.4
784	62	30	54.2	74.1	78.8	87.8	53.4	66.7	48.4	80.9	82.4
785	67	35	52.3	79.1	73.5	91.2	54.4	60.3	52.2	84.6	81.6
786	62	30	51.1	75.4	78.5	88.0	48.9	76.6	48.4	82.7	85.0
787	56	30	50.9	76.6	75.0	95.3	53.1	76.1	53.6	78.1	84.4

* Should be omitted because of broken nose.

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
788	45	1685	897	188	154	111	144	103	123	67	55	31
789	33	1691	895	186	145	108	133	102	126	85	58	36
790	20	1450	745	184	142	110	131	102	106	64	49	31
791	30	1648	845	201	153	114	138	109	124	73	56	30
792	30	1720	855	187	151	113	138	108	118	69	55	35
793	30	1538	835	180	146	108	131	101	122	66	50	26
794	32	1762	934	184	148	116	133	95	129	67	46	42
795	30	1647	865	184	145	113	133	104	123	67	51	34
796	35	1596	815	193	137	114	133	103	122	79	61	33
797	22	1640	865	191	144	114	134	107	122	70	54	37
798	35	1718	901	185	141	112	128	105	122	67	45	32
799	33	1627	835	176	145	107	134	98	114	67	45	32
800	30	1711	905	188	150	110	134	102	122	70	53	33
801	23	1730	919	201	158	122	147	118	122	71	51	33
802	35	1634	885	183	145	113	138	108	120	68	45	33
803	25	1732	915	187	152	113	134	103	131	76	57	33
804	50	1765	963	188	138	111	135	106	127	75	53	33
805	35	1870	985	190	151	121	144	107	126	75	54	45
806	25	.....	.....	192	157	118	140	104	126	78	60	33
807	35	1656	928	186	141	109	127	102	122	70	51	35
808	35	1726	865	188	143	114	134	97	137	82	60	35
809	40	1640	898	192	148	116	137	104	115	68	46	41
810	32	1710	920	185	138	118	133	103	132	72	54	29
811	40	1630	865	186	144	107	137	114	121	70	56	39
812	35	1730	914	187	146	115	136	108	116	73	58	31
813	18	1610	815	185	146	106	126	98	118	68	45	35
814	34	1585	857	187	157	120	140	109	122	65	43	31
815	22	1693	908	193	148	110	132	103	126	76	51	31
816	25	1586	830	182	152	108	132	107	120	71	52	32
817	20	1612	862	180	149	113	136	105	124	70	51	36
818	22	1700	911	182	151	114	134	103	124	76	51	28
819	32	1597	875	185	147	107	133	108	109	65	46	30
820	35	1760	905	189	147	113	132	108	135	75	58	31
821	32	1760	947	187	148	116	138	108	133	78	53	33
822	65	1602	792	183	147	115	136	113	128	82	59	35
823	46	1714	945	188	151	116	142	105	128	77	60	36
824	40	1640	870	192	136	116	133	93	128	72	47	35
825	35	1682	845	188	141	117	134	97	113	61	52	34
826	40	1695	860	198	142	112	132	101	127	76	52	33
827	40	1660	855	193	150	116	147	111	123	71	52	37
828	20	1505	832	170	137	104	133	107	116	68	52	34
829	22	1572	815	181	143	109	133	96	113	67	50	31
830	25	1652	848	199	148	111	137	113	118	67	53	35
831	40	1635	895	198	152	115	140	105	128	72	55	35
832	20	1570	808	185	153	115	136	101	107	66	45	35
833	20	1614	866	190	153	121	141	112	123	74	52	36
834	35	1705	855	179	143	111	133	106	111	65	42	36
835	35	1690	905	185	139	112	133	98	128	76	57	31
836	55	1660	880	194	145	110	137	107	124	72	55	33
837	55	1640	857	188	148	118	145	120	144	85	65	38
838	23	1713	889	188	147	111	134	101	121	72	50	37
839	40	1690	873	193	147	117	142	117	122	72	54	30
840	25	1710	920	181	142	110	132	94	101	65	46	37
841	30	1543	810	178	137	111	128	100	107	56	42	36
842	20	1645	880	191	147	107	137	104	113	67	54	30
843	35	1710	880	191	155	124	144	108	117	65	52	49

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
788	51	30	53.2	81.9	72.1	85.4	46.5	56.4	58.8	71.5	77.1
789	66	33	52.9	78.0	74.5	94.8	63.9	62.1	50.0	76.7	81.2
790	63	30	51.4	77.2	77.5	80.9	48.9	63.3	47.6	77.9	84.0
791	55	30	51.3	76.1	74.5	89.9	52.9	53.6	54.5	79.6	82.6
792	60	31	49.7	80.8	74.8	85.5	50.0	63.6	51.7	78.3	81.9
793	62	30	54.3	81.1	74.0	93.1	50.4	52.0	48.4	77.1	82.4
794	62	24	53.0	80.4	78.4	97.0	50.4	91.3	38.7	71.4	87.2
795	61	35	52.5	78.8	77.9	92.5	50.4	66.7	57.4	78.2	85.0
796	63	33	51.1	71.0	83.2	91.7	59.4	54.1	52.4	77.4	85.7
797	58	32	52.7	75.4	79.2	91.0	52.2	68.5	55.2	79.9	85.1
798	50	32	52.4	76.2	79.4	95.3	52.3	71.1	64.0	82.0	87.5
799	54	28	51.5	82.4	73.8	85.1	50.0	71.1	51.9	73.1	79.9
800	63	31	52.9	79.8	73.3	91.0	52.2	62.3	49.2	76.1	82.1
801	60	30	53.1	78.6	77.2	83.0	48.3	64.7	50.0	80.3	83.0
802	58	30	54.2	79.2	77.9	86.9	49.3	73.3	51.7	78.3	81.9
803	59	35	52.8	81.3	74.3	97.8	56.7	57.9	59.3	76.9	84.3
804	57	27	54.5	73.4	80.4	94.1	55.6	62.3	47.4	78.5	82.2
805	62	33	52.7	79.5	80.1	87.5	52.1	83.3	53.2	74.3	84.0
806	59	26	...	81.8	75.2	90.0	55.7	55.0	44.1	74.3	84.3
807	55	26	56.0	75.8	77.3	96.1	55.1	68.6	47.3	80.3	85.8
808	60	42	50.1	76.1	79.7	102.2	61.2	58.3	70.0	64.9	85.1
809	65	36	54.8	77.1	78.4	83.9	49.6	89.1	55.4	75.9	84.7
810	66	35	53.8	74.6	85.5	99.3	54.1	53.7	53.0	77.4	88.7
811	58	34	53.1	77.4	74.3	88.3	51.1	69.6	58.6	83.2	78.1
812	56	33	52.8	78.1	78.8	85.3	53.7	53.4	58.9	79.4	84.5
813	53	31	50.6	78.9	72.6	93.7	54.1	77.8	58.5	77.8	84.1
814	54	34	54.1	83.9	76.4	87.1	46.4	64.6	63.0	77.9	85.7
815	60	33	53.3	77.1	74.3	95.5	57.6	60.8	55.0	78.0	83.3
816	54	31	52.3	83.5	71.1	90.9	53.8	61.5	57.4	81.1	81.8
817	54	28	53.5	82.8	75.8	91.2	51.5	70.6	51.9	77.2	83.1
818	58	30	53.6	83.0	75.5	92.5	56.7	54.9	51.7	76.9	85.1
819	57	32	54.8	79.5	72.8	82.0	48.9	65.2	56.1	81.2	80.5
820	58	34	51.4	78.6	76.9	102.3	56.8	53.5	58.6	81.8	85.6
821	60	36	53.8	79.1	78.4	96.4	56.5	62.3	60.0	78.3	84.1
822	68	30	49.4	80.3	78.2	94.1	60.3	59.3	44.1	83.1	84.6
823	74	34	55.1	80.3	76.8	90.1	54.2	60.0	45.9	73.9	81.7
824	62	35	53.0	70.8	85.3	96.2	54.1	74.5	56.5	69.9	87.2
825	52	34	50.2	75.5	82.4	84.3	45.5	65.4	65.4	72.4	87.3
826	53	30	50.7	71.7	78.9	96.2	57.6	63.4	56.6	76.5	84.9
827	57	28	51.5	77.7	77.3	83.7	48.3	71.2	49.1	75.5	78.9
828	65	34	55.3	80.6	75.9	87.2	51.1	65.4	52.3	80.4	78.2
829	53	31	51.8	79.0	76.2	85.0	50.4	62.0	58.5	72.2	81.9
830	67	32	51.3	74.4	75.0	86.1	48.9	66.0	47.8	82.5	81.0
831	64	32	54.7	76.8	75.7	91.4	51.4	63.6	50.0	75.0	82.1
832	55	30	51.5	82.7	75.2	78.7	48.5	77.8	54.6	74.3	84.6
833	54	28	53.7	80.5	79.1	87.2	52.5	69.2	51.9	79.4	85.8
834	50	33	50.1	79.9	77.6	83.5	48.9	85.7	66.0	79.7	83.5
835	57	30	53.6	75.1	80.6	96.2	57.1	54.4	52.6	73.7	84.2
836	71	35	53.0	74.7	75.9	90.5	52.6	60.0	49.3	78.1	80.3
837	70	33	52.3	78.7	79.7	99.3	58.6	58.5	47.1	82.8	81.4
838	52	33	51.9	78.2	75.5	90.3	53.7	74.0	63.5	75.4	82.8
839	68	35	51.7	76.2	79.6	85.9	50.7	55.6	51.5	82.4	82.4
840	56	30	53.8	78.5	77.5	76.5	49.2	80.4	53.6	71.2	83.3
841	63	33	52.5	77.0	81.0	83.6	43.7	85.7	52.4	78.1	86.7
842	58	32	53.5	77.0	72.8	82.5	48.9	55.6	55.2	75.9	78.1
843	50	30	51.5	81.1	80.0	81.3	45.1	94.3	60.0	75.0	86.1

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
844	30	1690	871	188	144	110	134	106	118	78	61	30
845	25	1682	883	191	144	114	131	110	125	76	59	35
846	40	1734	930	187	140	111	131	111	121	71	55	34
847	45	1750	885	185	147	114	137	111	134	78	53	32
848	35	1640	875	193	153	113	138	110	124	75	60	34
849	40	1666	880	182	140	111	133	107	133	79	57	44
850	20	1605	858	187	142	115	136	100	116	74	58	33
851	20	1659	845	194	145	114	136	101	124	71	53	35
852	55	1674	870	192	153	115	138	109	125	74	3	37
853	28	1652	885	183	150	114	139	96	115	65	48	32.
854	20	1655	869	187	149	113	123	96	118	66	48	31
855	45	1568	820	190	138	107	126	104	133	81	59	31
856	50	1732	931	184	151	121	141	115	119	65	43	38
857	20	1692	825	190	144	117	135	103	114	62	46	31
858	30	1734	863	184	148	106	131	105	121	71	54	32
859	28	1662	905	191	154	111	142	101	120	70	47	31
860	20	1650	855	188	140	109	136	100	116	62	52	30
861	25	1770	939	195	147	113	134	101	117	68	54	35
862	22	1610	915	190	141	108	133	103	125	68	54	40
863	22	1613	850	178	142	106	130	101	114	66	51	30
864	30	1610	868	180	136	115	139	106	126	67	50	30
865	25	1710	849	195	141	113	133	107	119	76	57	35
866	35	1613	872	179	143	117	134	105	119	74	55	32
867	30	1682	849	188	147	116	143	101	121	68	51	37
868	35	1660	885	190	142	116	135	101	121	67	51	34
869	38	1690	891	175	135	105	126	106	...	81	58	35
870	30	1702	930	188	143	115	139	109	116	64	46	31
871	35	1737	878	200	136	115	140	111	131	76	59	38
872	27	1657	872	194	148	113	139	113	113	78	59	40
873	35	1703	890	191	138	115	143	107	131	73	53	34
874	25	1650	855	185	144	113	136	108	120	64	52	37
875	55	1702	905	187	151	114	137	110	115	68	55	35
876	35	1640	897	185	147	113	137	107	123	69	51	32
877	30	1770	950	190	143	109	137	110	127	73	56	33
878	30	1607	835	185	153	114	141	105	115	71	56	33
879	25	1694	909	178	147	114	138	107	107	66	55	26
880	56	1703	915	184	144	111	135	107	133	78	55	36
881	20	1687	895	187	144	113	132	102	117	64	51	31
882	27	1660	892	185	144	114	130	104	122	68	49	31
883	35	1750	...	189	141	113	133	98	120	68	47	44
884	25	1633	909	183	146	105	130	100	114	62	44	31
885	20	1626	876	186	157	122	142	116	121	67	51	36
886	40	1652	849	183	148	121	143	113	120	61	44	35
887	22	1567	815	184	135	111	133	104	117	62	48	37
888	35	1632	875	183	144	116	140	111	127	74	55	30
889	50	1590	835	190	149	113	138	105	117	67	50	35
890	30	1642	848	188	140	110	133	111	126	70	53	33
891	40	1670	906	185	147	113	138	102	110	64	46	27
892	25	1743	905	181	156	114	138	104	124	71	50	36
893	20	1710	845	203	141	110	133	104	123	69	57	33
894	35	1666	926	190	137	118	136	113	121	64	46	35
895	35	1650	875	192	145	114	140	108	124	74	54	34
896	50	1562	858	179	148	107	135	95	120	68	48	35
897	33	1654	932	188	147	108	132	97	120	72	50	33
898	23	1720	895	189	147	118	142	110	123	74	56	34

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
844	58	30	51.5	76.6	76.4	88.1	58.2	49.2	51.7	79.1	82.1
845	56	33	52.5	75.4	79.2	95.4	58.0	59.3	58.9	84.0	87.0
846	61	40	53.6	74.9	79.3	92.4	54.2	61.8	65.6	84.7	84.7
847	53	35	50.6	79.5	77.6	97.8	56.9	60.4	66.0	81.0	83.2
848	67	37	53.4	79.3	73.9	89.9	54.3	56.6	55.2	79.7	81.9
849	64	33	52.8	81.4	79.4	100.0	59.4	77.3	51.6	80.4	83.4
850	48	35	53.5	75.9	81.1	85.3	54.4	56.9	72.9	73.5	84.6
851	52	28	50.9	74.8	78.7	91.2	52.2	66.0	54.8	74.3	83.8
852	65	38	52.0	79.7	75.2	90.6	53.6	58.7	58.5	79.0	83.4
853	63	30	53.6	82.0	76.1	82.7	46.8	66.6	47.6	69.1	82.1
854	60	30	52.5	79.7	75.9	95.9	53.6	64.7	50.0	77.9	91.9
855	56	33	52.3	72.6	77.6	105.2	64.3	52.6	58.9	82.6	85.0
856	56	38	53.8	82.1	80.2	84.5	46.1	88.4	67.9	81.6	85.8
857	60	35	48.8	75.9	81.4	84.5	45.9	67.4	58.3	76.3	86.6
858	54	30	49.8	80.4	71.6	92.4	54.1	59.2	55.6	80.2	80.9
859	65	35	54.4	80.6	72.1	84.5	49.3	65.9	53.8	71.1	78.1
860	54	35	51.8	74.5	77.9	85.3	45.6	57.7	64.8	73.5	80.1
861	66	37	53.1	75.4	76.9	87.3	50.7	64.8	56.1	75.4	84.3
862	62	32	56.8	74.2	76.6	94.0	51.1	74.1	51.6	77.4	81.2
863	57	31	52.7	79.8	74.6	87.7	50.8	58.8	54.4	77.7	81.5
864	52	33	53.9	75.6	84.6	90.6	48.2	60.0	63.5	76.3	82.7
865	52	26	49.7	72.3	80.1	89.5	57.1	61.4	50.0	80.5	85.0
866	58	31	54.1	79.9	81.8	88.8	55.2	58.2	53.4	78.4	87.3
867	58	32	50.5	78.2	78.9	84.6	47.6	72.6	55.2	70.6	81.1
868	54	24	53.3	74.7	81.7	89.6	49.6	66.7	44.4	74.8	85.9
869	58	37	52.7	77.2	77.8	...	64.3	60.3	63.8	84.1	83.3
870	57	32	54.6	76.1	80.4	83.5	46.0	67.4	56.1	78.4	82.7
871	64	35	50.6	68.0	84.6	93.6	54.2	64.4	54.7	79.3	82.1
872	62	33	52.6	76.3	76.4	81.3	56.1	67.8	53.2	81.3	81.3
873	62	35	52.3	72.3	83.3	91.6	51.0	64.2	56.5	74.8	80.4
874	58	28	51.8	77.8	78.5	88.2	47.1	71.2	48.3	79.4	83.1
875	62	33	53.2	80.7	75.5	83.9	49.6	63.7	53.2	80.3	83.2
876	57	31	54.7	79.5	76.9	89.8	50.4	62.7	54.4	78.1	82.5
877	61	30	53.7	75.3	76.3	92.7	53.3	58.9	49.2	80.3	79.6
878	53	33	52.0	82.7	74.5	81.6	50.4	58.9	62.3	74.5	80.9
879	52	27	53.7	82.6	77.6	77.5	47.8	47.3	51.9	77.5	82.6
880	64	32	53.7	78.3	77.1	98.5	57.8	65.5	50.0	79.3	82.2
881	52	30	53.0	77.0	78.5	88.7	48.5	60.8	57.7	77.3	85.6
882	67	32	53.7	77.8	79.2	93.9	52.3	63.3	47.8	80.0	87.7
883	71	35	...	74.6	79.4	90.2	51.1	93.6	49.3	73.7	84.2
884	51	30	55.7	79.8	71.9	87.7	51.5	70.5	58.8	76.9	80.8
885	50	31	53.9	84.4	77.7	85.2	47.2	70.6	62.0	81.7	85.9
886	63	34	51.4	80.9	81.8	83.9	42.7	79.6	54.0	79.0	84.6
887	57	30	52.0	73.4	82.2	88.0	46.6	77.1	52.6	78.2	83.5
888	59	32	53.6	78.7	80.6	90.7	52.9	54.6	54.2	79.3	82.9
889	55	31	52.5	78.4	75.8	84.8	48.6	70.0	56.4	76.1	81.9
890	61	33	51.6	74.5	78.6	94.7	52.6	62.3	54.1	83.5	82.7
891	61	30	54.3	79.5	76.9	79.7	46.4	58.7	49.2	73.9	81.9
892	53	31	51.9	86.2	73.1	89.9	51.4	72.0	58.5	75.4	82.6
893	57	33	49.4	69.5	78.0	92.5	51.9	57.9	57.9	78.2	82.7
894	55	35	55.6	72.1	86.1	89.0	47.1	76.1	63.6	83.1	86.8
895	66	37	53.0	75.5	78.6	88.6	52.8	63.0	56.1	77.1	81.4
896	46	30	54.9	82.7	72.3	88.9	50.4	72.9	65.2	70.4	79.3
897	62	36	56.3	78.2	73.5	90.9	54.6	66.0	58.1	73.5	81.8
898	55	33	52.0	77.8	80.3	86.6	52.1	60.7	60.0	77.5	83.1

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
899	25	1700	865	185	151	118	141	115	128	78	58	35
900	25	1710	887	186	137	110	134	112	120	68	48	37
901	35	1704	915	197	158	121	148	116	129	68	52	44
902	33	1604	865	180	143	111	136	107	117	66	49	32
903	35	1594	845	199	143	107	129	99	120	64	45	33
904	35	1640	875	190	147	118	138	105	122	66	56	31
905	20	1686	872	178	154	118	146	102	126	72	57	32
906	20	1673	863	188	151	122	140	104	118	67	58	37
907	65	1710	881	186	143	111	137	108	108	70	55	38
908	30	1745	915	201	144	115	133	105	120	66	50	37
909	28	1652	925	184	147	115	135	105	120	74	57	36
910	25	1690	873	180	147	108	130	110	115	66	49	32
911	18	1553	855	187	142	107	129	86	120	68	56	25
912	18	1483	755	180	138	107	122	98	108	64	51	37
913	25	1630	901	190	140	108	135	104	117	72	54	34
914	30	1640	885	185	142	115	140	104	127	72	56	34
915	18	1640	885	184	138	108	128	97	110	60	48	36
916	40	1605	855	189	138	107	129	96	118	78	54	34
917	45	1665	873	193	150	113	135	116	131	78	62	35
918	23	1742	937	186	145	111	133	107	130	74	58	34
919	40	1657	865	200	153	118	140	115	128	76	58	36
920	65	1643	829	188	143	113	139	107	123	66	53	32
921	20	1644	855	185	147	113	138	100	118	60	48	31
922	20	1650	880	178	147	113	130	102	118	67	56	37
923	40	1695	870	190	140	113	136	102	124	74	57	41
924	40	1645	830	186	145	113	128	103	119	65	48	34
925	20	1610	837	178	138	111	132	110	113	67	50	34
926	40	1592	865	185	134	108	132	105	116	63	47	35
927	30	1685	890	187	142	110	136	107	120	71	57	31
928	30	1580	812	188	149	114	134	102	117	62	48	34
929	35	1723	889	197	138	114	138	107	120	67	54	36
930	60	1730	963	190	151	111	144	103	128	73	65	40
931	40	1710	900	176	152	115	139	102	118	72	50	37
932	55	1754	875	196	144	118	139	100	126	76	57	42
933	50	1610	895	188	146	121	132	122	127	73	60	38
934	45	1530	800	190	144	117	137	111	125	68	53	37
935	35	1651	818	188	149	111	132	98	117	67	48	37
936	33	1656	858	190	138	113	126	104	117	71	58	34
937	40	1680	885	188	146	115	135	100	116	69	52	37
938	40	1760	942	181	135	113	132	107	133	74	52	43
939	30	1670	885	195	151	114	137	110	121	79	66	37
940	30	1632	855	184	139	115	128	97	125	72	57	37
941	45	1665	915	195	140	114	139	104	125	72	55	42
942	50	1580	837	184	146	113	141	98	125	72	53	42
943	30	1603	858	190	143	113	131	104	124	68	52	38
944	20	1727	887	177	152	116	136	110	125	68	54	37
945	40	1847	927	189	142	117	138	107	131	75	56	41
946	25	1736	915	192	143	115	132	100	118	72	52	35
947	30	1650	907	186	145	108	141	110	123	73	53	34
948	28	1657	881	190	153	117	137	102	128	72	62	33
949	45	1710	875	189	140	118	125	102	122	68	49	38
950	23	1743	910	184	154	116	140	102	124	69	51	38
951	20	1670	880	182	148	114	131	102	118	72	52	36
952	35	1736	905	191	148	118	140	107	119	70	50	41
953	32	1660	893	193	146	116	137	103	124	74	63	44

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
899	58	34	50.9	81.8	78.2	90.8	55.3	60.3	58.6	81.6	83.7
900	58	33	51.9	73.7	80.3	89.6	50.8	77.1	56.9	76.1	82.1
901	60	34	53.7	80.2	76.6	87.2	45.9	84.6	56.7	78.4	81.8
902	52	27	53.9	79.4	77.6	86.0	48.5	65.3	51.9	78.7	81.6
903	45	32	53.0	71.9	74.8	93.0	49.6	84.4	71.1	76.7	83.0
904	59	31	53.4	77.4	80.3	88.4	47.8	55.4	52.5	76.1	85.5
905	60	37	51.7	86.5	76.6	86.3	49.3	56.1	61.7	69.9	80.8
906	53	33	51.6	80.3	80.8	84.3	47.8	63.8	62.3	74.3	87.1
907	63	31	51.5	76.9	77.6	78.8	51.1	69.1	49.2	78.8	81.0
908	57	30	52.4	71.6	79.9	90.2	49.6	74.0	52.6	78.9	86.5
909	58	33	56.0	79.9	78.2	88.9	54.8	63.2	56.9	77.8	85.2
910	56	33	51.7	81.7	73.5	88.5	50.8	65.3	58.9	84.6	83.1
911	46	32	55.1	75.9	75.4	93.0	52.7	44.6	69.6	66.7	82.9
912	53	31	50.9	76.7	77.5	88.5	52.5	72.6	58.5	80.3	87.7
913	54	28	55.3	73.7	77.1	86.7	53.3	63.0	51.9	77.0	80.0
914	55	33	54.0	76.8	81.0	90.7	51.4	60.7	60.0	74.3	82.1
915	55	30	54.0	75.0	78.3	85.9	46.9	75.0	54.6	75.8	84.4
916	56	34	53.3	73.0	77.5	91.5	60.5	63.0	60.7	74.4	82.9
917	65	35	52.4	77.7	75.3	97.0	57.8	56.5	53.9	85.9	83.7
918	64	34	53.8	78.0	76.6	97.7	55.6	58.6	53.1	80.5	83.5
919	60	36	52.2	76.5	77.1	91.4	54.3	62.1	60.0	82.1	84.3
920	60	36	50.5	76.1	79.0	88.5	47.5	60.4	60.0	77.0	81.3
921	59	34	52.0	79.5	76.9	85.5	43.5	64.6	57.6	72.5	81.9
922	58	31	53.3	82.6	77.9	90.8	51.5	66.1	53.5	78.5	86.9
923	57	30	51.3	73.7	80.7	91.2	54.4	71.9	52.6	75.0	83.1
924	53	26	50.5	78.0	77.9	93.0	50.8	70.8	49.1	80.5	88.3
925	52	30	52.0	77.5	80.4	85.6	50.8	68.0	57.7	83.3	84.1
926	65	30	54.3	72.4	80.6	87.9	47.7	74.5	46.2	79.6	81.8
927	57	33	52.8	75.9	77.5	88.2	52.2	54.4	57.9	78.7	80.9
928	53	27	51.4	79.3	76.5	87.3	46.3	70.8	50.9	86.1	85.1
929	55	30	51.6	70.1	82.6	87.0	48.6	66.7	54.6	77.5	82.6
930	67	35	55.7	79.5	73.5	88.9	50.7	61.5	52.2	71.5	77.1
931	54	32	52.6	86.4	75.7	84.9	51.8	74.0	59.3	73.4	82.7
932	71	33	49.9	73.5	81.9	90.7	54.7	73.7	46.5	71.9	84.9
933	67	34	55.6	77.7	82.9	96.2	55.3	63.3	50.8	92.4	91.7
934	62	30	52.3	75.8	81.3	91.2	49.6	69.8	48.4	81.0	85.4
935	60	30	49.5	79.3	74.5	88.6	50.8	77.1	50.0	74.2	84.1
936	54	33	51.8	72.6	81.9	92.9	56.4	58.6	61.1	82.5	89.7
937	65	33	52.7	77.7	78.8	85.9	51.1	71.2	50.8	74.1	85.2
938	63	34	53.5	74.6	83.7	100.8	56.1	82.7	54.0	81.1	85.6
939	60	37	53.0	77.4	75.5	88.3	57.7	56.1	61.8	80.3	83.2
940	51	28	52.4	75.5	82.7	97.7	56.2	64.9	54.9	75.7	89.8
941	59	36	55.0	71.8	81.4	89.9	51.8	76.4	61.0	74.8	82.0
942	65	38	53.0	79.4	77.4	88.7	51.1	79.3	58.5	69.5	80.1
943	51	33	53.5	75.3	79.0	94.7	51.9	73.1	64.7	79.4	86.3
944	64	32	51.3	85.9	76.3	91.9	50.0	68.5	50.0	80.9	85.3
945	70	31	50.2	75.2	82.4	94.9	54.3	73.2	44.3	77.5	84.8
946	60	32	52.7	74.5	80.4	89.4	54.6	67.3	53.3	75.8	87.1
947	58	31	55.0	78.0	74.5	87.2	51.8	64.2	53.5	78.0	76.6
948	62	32	53.2	80.5	76.5	94.4	52.6	53.2	51.6	74.5	85.4
949	58	33	51.2	74.2	84.3	97.6	54.4	77.6	56.9	81.6	94.4
950	49	28	52.2	83.7	75.3	88.6	49.3	74.5	57.1	72.9	82.9
951	56	28	52.6	81.3	77.0	90.1	55.0	69.2	50.0	77.9	87.0
952	60	32	52.2	77.5	79.7	85.0	50.0	82.0	53.3	76.4	84.3
953	62	33	53.8	75.7	79.5	90.5	54.0	69.8	53.2	75.2	84.7

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD TRIBESMEN

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
765	l w	coarse	black	bl-br	clear	zon	conv	m-fl
766	l w	medium	dk br	bl-br	blood	hom	conv	medium
767	l w	medium	dk br	bl-br	clear	zon	....	.....
768	l w	medium	v dk br	bl-br	clear	hom	str	m-fl
769	l w	medium	dk br	bl-br	clear	zon	conv	medium
770	c-f	medium	black	bl-br	clear	zon	conv	m-fl
771	l w	coarse	black	bl-br	speck- blood	ray	str	comp
772	l w	medium	dk br	bl-br	clear	hom	str	medium
773	l w	medium	dk br	bl-br	clear	hom	conc	medium
774	l w	medium	dk br	bl-gray	clear	ray	str	medium
775	l w	medium	dk br	bl-br	clear	hom	str	cp-m
776	l w	medium	dk br	bl-br	clear	hom	str	m-fl
777	l w	medium	dk br	bl-br	clear	zon	conv	cp-m
778	l w	medium	br, gray	bl-br	clear	zon	str	medium
779	l w	medium	.....	bl-br	clear	hom	str	medium
780	l w	medium	dk br	bl-br	clear	hom	conv	cp-m
781	...	medium	dk br	bl-br	clear	zon	str	flar
782	l w	medium	v dk br	bl-br	clear	hom	str	medium
783	l w	medium	br, gray	bl-br	clear	hom	str	m-fl
784	d w	medium	dk br	bl-br	....	....	str	medium
785	l w	medium	br, gray	gr-br	clear	ray	str	medium
786	l w	medium	dk br	bl-br	clear	hom	str	medium
787	l w	medium	dk br	gr-br	clear	ray	str	medium
788	l w	medium	br, gray	bl-br	clear	hom	str	comp
789	l w	medium	dk br	bl-br	clear	hom	conv	medium
790	l w	medium	dk br	bl-br	clear	hom	conv	medium
791	l w	medium	dk br	bl-br	clear	zon	str	medium
792	l w	medium	dk br	bl-br	clear	hom	str	m-fl
793	l w	medium	dk br	bl-br	clear	hom	str	medium
794	c-f	coarse	black	bl-br	clear	hom	str	flar
795	l w	medium	dk br	bl-br	clear	hom	str	medium
796	l w	medium	dk br	bl-br	clear	hom	conv	medium
797	l w	coarse	v dk br	bl-br	clear	hom	str	m-fl
798	l w	medium	dk br	bl-br	clear	zon	conv	medium
799	l w	medium	dk br	bl-br	clear	hom	str	medium
800	l w	medium	dk br	....	clear	hom	conv	cp-m
801	d w	medium	dk br	bl-br	....	....	str	m-fl
802	l w	medium	dk br	bl-br	clear	hom	str	comp
803*	...	.....	.....	bl-br	clear	zon	str	medium
804	l w	medium	br, gray	bl-br	clear	hom	str	medium
805	c-f	medium	v dk br	bl-br	blood	hom	c-c	flar
806	l w	medium	dk br	bl-br	clear	hom	str	medium
807	c-f	medium	dk br	bl-br	clear	hom	str	m-fl
808	l w	medium	dk br	bl-br	clear	hom	str	medium
809	l w	medium	br, gray	bl-br	clear	hom	str	flar
810	l w	medium	br, gray	bl-br	clear	hom	conv	cp-m
811	d w	medium	dk br	bl-br	clear	hom	c-c	m-fl
812	l w	medium	dk br	gr-br	clear	hom	conv	.....
813	l w	medium	dk br	bl-br	clear	zon	....	medium
814	l w	medium	dk br	bl-br	clear	...	str	medium
815	l w	medium	dk br	bl-br	clear	zon	str	m-fl
816	l w	medium	dk br	bl-br	clear	zon	str	medium
817	l w	medium	dk br	bl-br	clear	zon	str	medium
818	l w	medium	dk br	bl-br	clear	hom	str	medium
819	l w	medium	dk br	bl-br	clear	zon	conv	medium

*Shaved.

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD TRIBESMEN

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
820	l w	medium	br, gray	bl-br	clear	zon	conv	medium
821	l w	medium	dk br	bl-br	clear	hom	conv	m-fl
822	c-f	medium	gray		yellow	zon	conv	m-fl
823	l w	medium	dk br	bl-br	blood	hom	conv	medium
824	l w	medium	br, gray	bl-br	clear	zon	conv	medium
825	l w	medium	v dk br	bl-br	clear	zon	str	medium
826	l w	medium	dk br	bl-br	clear	hom	str	medium
827	l w	medium	dk br	bl-br	clear	....	c-c	m-fl
828	l w	medium	black	bl-br	clear	hom	conv	medium
829	...	medium	v dk br	....	clear	hom	c-c	medium
830	l w	medium	dk br	bl-br	clear	hom	str	cp-m
831	l w	medium	br, gray	bl-br	clear	hom	conv	medium
832	l w	fine	dk br	gr-br	clear	hom	wavy	m-fl
833	l w	medium	black	bl-br	clear	hom	conc	m-fl
834	l w	medium	dk br	bl-br	clear	zon	conv	medium
835	l w	medium	br, gray	bl-br	clear	hom	str	medium
836	c-f	coarse	br, gray	bl-br	blood	zon	conv	medium
837	l w	coarse	br, gray	bl-br	clear	zon	conv	flar
838	l w	coarse	black	bl-br	clear	hom	conv	comp
839	l w	medium	dk br	bl-br	clear	hom	conv	medium
840	l w	medium	dk br	bl-br	clear	zon	str	m-fl
841	l w	medium	dk br	bl-br	clear	zon	conc	medium
842	l w	medium	dk br	bl-br	clear	hom	conv	medium
843	c-f	coarse	black	dk br	clear	hom	conc	flar
844	l w	medium	dk br	gr-br	blood	zon	str	medium
845	l w	fine	v dk br	....	clear	hom	str	m-fl
846	l w	coarse	black	bl-br	clear	hom	conv	m-fl
847	l w	medium	br, gray	bl-br	clear	zon	conv	comp
848	l w	medium	dk br	bl-br	clear	ray	conv	medium
849	l w	medium	br, gray	dk br	clear	hom	str	flar
850	v l w	medium	dk br	bl-br	clear	hom	str	medium
851	l w	medium	dk br	bl-br	clear	hom	str	medium
852	l w	medium	dk br	gr-br	clear	ray	c-c	medium
853	l w	medium	v dk br	bl-br	clear	zon	conv	medium
854	l w	medium	dk br	....	clear	hom	str	medium
855	l w	medium	dk br	bl-br	clear	hom	conv	comp
856	l w	coarse	black	bl-br	clear	hom	str	medium
857	c-f	coarse	black	bl-br	clear	ray	str	medium
858	l w	medium	dk br	bl-br	clear	ray	conv	comp
859	l w	medium	dk br	bl-br	clear	zon	str	cp-m
860	l w	m-fine	v dk br	bl-br	clear	ray	conv	cp-m
861	l w	coarse	v dk br	bl-br	clear	hom	conv	comp
862	l w	medium	black	bl-br	clear	hom	str	flar
863	l w	medium	v dk br	bl-br	clear	hom	conv	medium
864	l w	c-med	dk br	bl-br	clear	hom	str	medium
865	l w	c-med	dk br	bl-br	clear	hom	conv	medium
866	d w	medium	dk br	bl-br	clear	hom	conv	comp
867	l w	coarse	black	bl-br	clear	zon	conv	m-fl
868	v l w	medium	br, gray	bl-br	clear	ray	conv	medium
869	l w	fine	br, gray	bl-br	clear	hom	str	comp
870	l w	medium	dk br	bl-br	clear	hom	str	comp
871	l w	coarse	black	bl-br	clear	zon	str	medium
872	l w	medium	black	bl-br	clear	....	str	m-fl
873	l w	medium	dk br	bl-br	clear	zon	str	cp-m
874	l w	medium	black	bl-br	clear	hom	conv	medium
875	l w	medium	blk, gray	bl-br	clear	hom	str	medium
876	l w	medium	black	bl-br	clear	zon	str	cp-m
877	d w	medium	dk br	bl-br	clear	hom	str	cp-m

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD TRIBESMEN

No.	Form	HAIR		EYES			NOSE	
		Texture	Color	Color	Sclera	Iris	Profile	Wings
878	l w	medium	black	bl-br	speck	....	str	medium
879	l w	coarse	black	bl-br	clear	zon	conv	comp
880	l w	medium	blk, gray	bl-br	clear	hom	str	medium
881	...	.....	.....	.....	.....	.....	.....	.....
882	l w	medium	black	bl-br	clear	zon	str	comp
883	l w	medium	black	bl-br	....	zon	str	medium
884	l w	medium	.....	bl-br	clear	zon	str	comp
885	l w	medium	.....	bl-br	clear	zon	conv	m-fl
886	l w	coarse	blk, gray	bl-br	clear	zon	conv	m-fl
887	l w	coarse	dk br	bl-br	clear	zon	str	medium
888	l w	medium	black	bl-br	clear	zon	wavy	medium
889	l w	medium	.....	bl-br	clear	zon	str	medium
890	l w	fine	black	bl-br	speck	zon	str	medium
891	l w	medium	.....	bl-br	clear	zon	str	comp
892	l w	medium	dk br	bl-br	clear	hom	wavy	m-fl
893	l w	medium	dk br	bl-br	clear	hom	str	medium
894	c-f	coarse	black	bl-br	speck	....	str	comp
895	l w	medium	black	bl-br	clear	zon	str	medium
896	l w	medium	black	bl-br	speck	ray	str	medium
897	l w	medium	.....	bl-br	....	....	str	comp
898	l w	medium	black	bl-br	clear	zon	str	medium
899	l w	medium	dk br	bl-br	clear	hom	str	medium
900	l w	medium	v dk br	bl-br	clear	hom	conv	cp-m
901	l w	medium	.....	bl-br	clear	zon	str	m-fl
902	l w	medium	v dk br	bl-br	clear	zon	str	comp
903	l w	medium	dk br	bl-br	clear	zon	conv	medium
904	l w	medium	black	bl-br	clear	hom	str	comp
905	l w	medium	black	bl-br	speck	zon	conv	medium
906	l w	medium	black	bl-br	clear	hom	conv	medium
907	l w	medium	br, gray	bl-br	blood	zon	str	medium
908	l w	medium	dk br	bl-br	clear	zon	str	m-fl
909	l w	medium	dk br	bl-br	clear	ray	conv	m-fl
910	l w	coarse	black	dk br	clear	hom	conc	cp-m
912	l w	medium	black	bl-br	clear	....	str	medium
913*	...	.....	.....	bl-br	clear	ray	str	medium
914	l w	coarse	black	bl-br	clear	zon	conv	medium
915	l w	medium	dk br	bl-br	clear	hom	str	medium
916	l w	medium	black	bl-br	clear	zon	str	m-flar
917	l w	coarse	blk, gray	bl-br	speck	hom	str	cp-m
918	l w	medium	black	bl-br	clear	zon	str	m-fl
919	l w	medium	br, gray	bl-br	clear	hom	str	medium
920	...	coarse	br, gray	bl-br	blood	zon	conv	comp
921	l w	medium	dk br	bl-br	clear	ray	conv	cp-m
922	l w	medium	black	bl-br	clear	zon	str	m-fl
923	l w	medium	br, gray	bl-br	clear	hom	str	flar
924	l w	medium	dk br	bl-br	clear	ray	conv	medium
925	l w	coarse	dk br	bl-br	clear	ray	conv	medium
926	l w	medium	dk br	bl-br	clear	zon	conv	cp-m
927	l w	medium	dk br	bl-br	clear	zon	str	medium
928	l w	coarse	dk br	bl-br	clear	zon	str	comp
929	l w	coarse	dk br	bl-br	clear	hom	str	medium
930	l w	medium	br, gray	bl-br	clear	hom	str	flar
931	l w	medium	dk br	bl-br	clear	hom	conv	m-fl
932	c-f	coarse	br, gray	bl-br	clear	hom	str	m-fl
933	l w	coarse	br, gray	bl-br	clear	zon	str	medium
934	l w	coarse	dk br	bl-br	clear	hom	str	m-fl

* Shaved.

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD TRIBESMEN

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
935	l w	c-med	v dk br	bl-br	clear	hom	str	m-fl
936	l w	coarse	dk br	bl-br	speck	ray	conv	m-fl
937	l w	medium	dk br	bl-br	speck	hom	conv	medium
938	...	coarse	black	bl-br	clear	zon	conv	flar
939	l w	medium	v dk br	bl-br	clear	hom	str	cp-m
940	l w	c-med	v dk br	bl-br	clear	hom	c-c	m-fl
941	...	coarse	v dk br	bl-br	blood	ray	str	m-fl
942	l w	coarse	br, gray	bl-br	clear	ray	str	flar
943	l w	medium	dk br	bl-br	clear	ray	conv	m-fl
944	l w	medium	dk br	dk br	clear	ray	conv	medium
945	l w	coarse	black	bl-br	blood	ray	conv	m-fl
946	l w	coarse	dk br	bl-br	clear	zon	str	cp-m
947	l w	m-fine	dk br	bl-br	clear	hom	c-c	cp-m
948	l w	medium	dk br	bl-br	clear	hom	conv	m-fl
949	l w	medium	lt br	bl-gr	clear	ray	str	medium
950	l w	m-fine	dk br	dk br	speck	ray	c-c	m-fl
951	l w	coarse	dk br	bl-br	speck	ray	conv	medium
952*	...	.....	.....	bl-br	clear	zon	conc	m-fl
953	l w	m-fine	dk br	bl-br	clear	hom	str	flar

* Shaved.

NOTES ON AL BU MUHAMMAD FEMALES

On April 22, 1934, Miss Smeaton examined and measured three women at Sheikh Khazal's camp. Measurements of these women were taken at the request of one of the sheikhs.

No. 1004.—Birthplace, Amara. Although only about thirty years of age, she had been married six times but was childless. She was tattooed on the arms, back, and thighs. The color of the skin was darker than that of most Arabs. The hair had low waves, was medium in texture, and dark brown in color, possibly due to the application of henna. The color of the eyes was dark brown, the sclera clear, and the rim of the rayed iris slightly darker than the iris itself. The nasal profile was straight, with a depressed nasal tip and flaring nasal wings. No teeth had been lost and the occlusion was slightly over. The teeth were in very good condition.

No. 1005.—Birthplace, Al Uzair (Ezra's Tomb). Twenty to twenty-two years old. She had married at puberty, had two sons living and two dead, two daughters living and one dead. She also had two sisters living. Her chin, hands, feet, and body were elaborately tattooed. Her skin was very clear and light in color and her cheeks rosy. She used no powder. Her hair had low waves, was medium in texture, and dark brown in color. Her large eyes were green brown, with clear sclera and rayed iris with a darker rim. The

nasal profile was slightly concave, the nasal tip medium in thickness, the nasal wings were medium, the nasal septum was inclined down. The general musculature was good; the square face and chin were fat, and the thighs heavy. Her health was consistently good.

No. 1006.—Birthplace, Ghuraib. About forty years old. She had borne seven children, four boys and three girls, all of whom were living. She had one brother and two sisters living, and one brother dead. She was tattooed on the brow, chin, and arms. The color of the skin was darker than the average. The hair had low waves, was coarse in texture, and dark brown in color. The eyes were dark brown with clear sclera and a rayed iris. The nasal profile was straight with medium wings.

MORPHOLOGICAL CHARACTERS OF AL BU MUHAMMAD FEMALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
1004	l w	medium	dk br	dk br	clear	...	str	flar
1005	l w	medium	dk br	gr-br	clear	ray	conc	medium
1006	d w	coarse	dk br	dk br	clear	...	str	medium

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
1004	30	.....	...	182	143	96	130	87	108	72	51	36
1005	21	1563	805	176	151	102	131	92	104	70	52	35
1006	40	1579	810	186	146	102	129	89	107	69	46	34

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
1004	67	34	.....	78.6	67.1	83.1	55.4	70.6	55.2	66.9	73.9
1005	60*	31	51.3	85.8	67.6	79.4	53.4	67.3	51.7*	75.6	77.9
1006	57	33	51.3	78.5	69.9	83.0	53.5	73.9	57.9	69.0	79.1

* Stretched slightly from heavy earrings.

THE AL SAWAAD

The Al Sawaad is a sedentary tribe scattered among the rice fields on the right bank of the Musharra Canal. Most of the tribesmen live in the marshes near Halfaya, which lies about twenty miles east of Amara. They tend cattle and cultivate the soil. As a result of their small numerical strength they are overshadowed in importance by the Bani Lam and the Al bu Muhammad.

The tribe is said to be descended from the Bani Himyar and is of the same origin as the Al Azairij. Some tribesmen claim that the name Sawaad is an incorrect interpretation of their original section, the Saad, so-called after one of their ancestors.

Definite physical differences between the Al bu Muhammad and the Al Sawaad tribesmen were described by the Chief of Police in Amara. Since we had obtained anthropometric statistics on the former it was thought desirable to obtain a comparative series on a group of the Al Sawaad. With considerable difficulty and only through the co-operation of the local Chief of Police at Halfaya was it possible to induce fifty tribesmen to offer themselves for study. A superficial examination indicated that the Al Sawaad had lighter skin color than the Al bu Muhammad. The general shape of the face also appeared squarer, probably because of unusual development of the masseter muscles, which tended to increase the bigonial breadth.

Other observations, however, resembled closely those made on the Al bu Muhammad tribesmen. The hair was almost black in color and medium-coarse in texture, with low waves. The eyes were very dark brown, the sclera clear, and the greater number of the irides were either homogeneous or zoned. The nose was straight with medium-compressed wings although the medium-flaring element was present.

Vital Statistics.—It was impossible to obtain information on vital statistics but the parents of all these individuals were members of the Al Sawaad tribe, who lived in the Halfaya district.

Age.—The average age for the fifty men was 33.50 (range 20–64). About half of the individuals were between 20 and 29 years of age.

FREQUENCY DISTRIBUTION OF AGE

Age	No.	Per cent	Age	No.	Per cent
18–19.....	0	.....	45–49.....	9	18.00
20–24.....	12	24.00	50–54.....	0	.....
25–29.....	12	24.00	55–59.....	2	4.00
30–34.....	7	14.00	60–64.....	1	2.00
35–39.....	6	12.00	65–69.....	0	.....
40–44.....	1	2.00	70–x.....	0	.....
Total.....				50	100.00

MORPHOLOGICAL CHARACTERS OF AL SAWAAD TRIBESMEN

Skin.—The color was lighter than that of the Al bu Muhammad tribesmen and about the same as that of the Arabs of the Kish area. Individually it ranged from that of a typical western European to dark brown. The skin color was slightly lighter than we had anticipated, since these tribesmen lead an agricultural and pastoral existence, which should tend to give the skin a weather-beaten appearance.

Hair.—The hair color varied from dark brown to black, which I now think should have been classified as very dark brown. Twenty-three hair samples were obtained.

HAIR					
Color	No.	Per cent	Form	No.	Per cent
Black	35	77.78	Straight	0	.....
Very dark brown	0	.....	Very low waves	0	.....
Dark brown	2	4.44	Low waves	41	91.11
Brown	0	.....	Deep waves	4	8.89
Reddish brown	0	.....	Curly-frizzly	0	.....
Light brown	0	.....	Woolly	0	.....
Red	0	.....		
Black and gray	5	11.11	Total	45	100.00
Dark brown and gray	2	4.44			
Light brown and gray	0	.....	Texture	No.	Per cent
Gray	1	2.22	Coarse	8	17.78
White	0	.....	Coarse-medium	0	.....
Total	45	99.99	Medium	35	77.78
			Medium-fine	0	.....
			Fine	2	4.44
			Total	45	100.00

Head hair was abundant. There appeared to be an average amount of face and body hair.

Eyes.—The majority of the eyes were dark brown or blue-brown. Eleven men (22 per cent) had either *blue*-brown or green-brown eyes. The blue and green elements indicate submerged blondism. The iris was either homogeneous or zoned. The six rayed irides could only have been recorded on the light eyes.

EYES					
Color	No.	Per cent	Iris	No.	Per cent
Black	0	.....	Homogeneous	20	44.44
Dark brown	21	42.00	Rayed	6	13.33
Blue-brown	18	36.00	Zoned	19	42.22
Blue-brown	3	6.00	Total	45	99.99
Green-brown	8	16.00			
Green-brown	0	.....	Sclera	No.	Per cent
Gray-brown	0	.....	Clear	44	95.65
Blue	0	.....	Yellow	0	.....
Gray	0	.....	Speckled	0	.....
Light brown	0	.....	Bloodshot	2	4.35
Blue-gray	0	.....	Speckled and bloodshot	0	.....
Blue-green	0	.....	Speckled and yellow	0	.....
Total	50	100.00	Yellow and bloodshot	0	.....
			Total	46	100.00

Nos. 957, 977, and 988 had *blue*-brown eyes. No. 984 was blind in the left eye; No. 985 was blind in the right eye as a result of a

bad cataract; and No. 993 had a small cataract forming near the inner orbital margin of the right eye.

Nose.—The nasal profile was either straight or convex. The presence of alae recorded as flaring or flaring plus in two men indicates the presence of Negro blood. Four men had thicker than average nasal tip thickness and one man was recorded in the double plus group.

NOSE

Profile	No.	Per cent	Wings	No.	Per cent
Wavy.....	2	4.00	Compressed.....	8	16.00
Concave.....	0	.....	Compressed-medium....	5	10.00
Straight.....	25	50.00	Medium.....	23	46.00
Convex.....	22	44.00	Medium flaring.....	12	24.00
Concavo-convex.....	1	2.00	Flaring.....	1	2.00
			Flaring plus.....	1	2.00
Total.....	50	100.00	Total.....	50	100.00

Mouth.—The lips varied in thickness from average (Nos. 966 and 972) to broad (Nos. 996 and 1000) and everted (No. 1003). No. 955 was a mouth-breather.

Teeth.—The occlusion was recorded as marked-over in every case. I now think this should have been slight-over instead of marked-over. The teeth were extra good in Nos. 954, 962, 963, 971–973, 977, 978, 996, and 1002. No. 968 had fair teeth, Nos. 956, 989, and 991 were in poor condition, while No. 957 had very poor teeth. No. 961 had good teeth but the front teeth were irregular.

TEETH

Condition	No.	Per cent	Loss	No.	Per cent
Very bad.....	1	2.70	None.....	0	.....
Bad.....	3	8.11	1–4.....	2	40.00
Fair.....	1	2.70	5–8.....	0	.....
Good.....	21	56.76	9–16.....	3	60.00
Excellent.....	11	29.73	17–.....	0	.....
			All.....	0	.....
Total.....	37	100.00	Total.....	5	100.00

The general condition of the teeth was good or excellent.

Disease.—Nos. 959, 992, and 997 had smallpox scars.

Branding Scars.—No. 958 had a *chawi* (*kawi*) scar on his left wrist.

Tattooing.—Forty-five men (89.13 per cent) bore tattooed designs. Five men were recorded as having none.

Musculature.—In general, this was either good or excellent.

MUSCULATURE		
	No.	Per cent
Poor.....	0	.....
Fair.....	2	4.00
Average.....	0	.....
Good.....	42	84.00
Excellent.....	6	12.00
Total.....	50	100.00

STATISTICAL ANALYSES OF AL SAWAAD TRIBESMEN

The size of this group (50) does not warrant statistical deductions, but the care with which the individuals were selected by the local police and the general composition of the group would seem to indicate that averages taken from a large series would not differ very markedly.

Stature and Sitting Height (Trunk Length).—Although the individuals in this group exhibit a relatively narrow age range within the young adult categories, the majority were medium in stature (160.0–170.0).

STATURE					
Harvard System	No.	Per cent	Keith System	No.	Per cent
Short ($x-160.5$).....	8	16.00	Short ($x-159.9$).....	7	14.00
Medium (160.6-169.4).. <td>27</td> <td>54.00</td> <td>Medium (160.0-169.9)..<td>28</td><td>56.00</td></td>	27	54.00	Medium (160.0-169.9).. <td>28</td> <td>56.00</td>	28	56.00
Tall (169.5- x).....	15	30.00	Tall (170.0-179.9).....	15	30.00
			Very tall (180.0- x).....	0	.....
Total.....	50	100.00	Total.....	50	100.00

Both classificatory systems group the individuals almost identically. The wide range suggests the presence of two racial elements. It was surprising to find so many men over 169.5, since this is several points above the average for Southwestern Asia.

SITTING HEIGHT (Trunk Length)		
Group	No.	Per cent
Very short ($x-74.9$).....	0	.....
Short (75.0–79.9).....	0	.....
Medium (80.0–84.9).....	8	16.00
Long (85.0–89.9).....	26	52.00
Very long (90.0– x).....	16	32.00
Total.....	50	100.00

Head Measurements and Indices.—According to the Harvard system the majority (54 per cent) were mesocephalic with a tendency toward dolichocephaly. The additional divisions of the Keith

system reveal a different frequency distribution. The ultradolichocephalic and ultrabrachycephalic elements indicate the presence of two racial stocks, a supposition already formulated on the basis of the almost equal percentages of straight and convex noses. The round-headed individuals are the most significant, since dolichocephaly and mesocephaly were anticipated in this area. At the same time, it must be noted that the ultrabrachycephalic Bakhtiaris live but 200 air miles from the eastern confines of the Hor al Hawiza.

MINIMUM FRONTAL DIAMETER

Group	No.	Per cent
Very narrow (x-99).....	0	.....
Narrow (100-109).....	7	14.00
Wide (110-119).....	37	74.00
Very wide (120-x).....	6	12.00
Total.....	50	100.00

HEAD BREADTH

Group	No.	Per cent
Very narrow (120-129).....	0	.....
Narrow (130-139).....	9	18.00
Wide (140-149).....	25	50.00
Very wide (150-x).....	16	32.00
Total.....	50	100.00

CEPHALIC INDEX

Keith System	No.	Per cent	Harvard System	No.	Per cent
Ultradolichocephalic....	1	2.00	Dolichocephalic.....	16	32.00
(x-70.0)			(x-76.5)		
Dolichocephalic.....	11	22.00	Mesocephalic.....	27	54.00
(70.1-75.0)			(76.6-82.5)		
Mesocephalic.....	20	40.00	Brachycephalic.....	7	14.00
(75.1-79.9)			(82.6-x)		
Brachycephalic.....	15	30.00	Total.....	50	100.00
(80.0-84.9)					
Ultrabrachycephalic....	3	6.00			
(85.0-x)					
Total.....	50	100.00			

Facial and Nasal Measurements and Indices.—It is remarkable that despite seven men with short upper faces there were none in the short (x-109) total facial height division. Both facial heights indicate the presence of two racial elements, since there is such wide dispersion. The index classifies half of the group into the leptoprosopic category, with only five men (10 per cent) in the euryprosopic division.

FACIAL MEASUREMENTS AND INDICES

Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short..... (x-63)	7	14.00	Short..... (x-109)	0	.....
Medium short..... (64-69)	23	46.00	Medium short..... (110-119)	16	32.00
Medium long..... (70-75)	14	28.00	Medium long..... (120-129)	27	54.00
Long..... (76-x)	6	12.00	Long..... (130-x)	7	14.00
Total.....	50	100.00	Total.....	50	100.00

Total facial index	No.	Per cent
Euryprosopic (x-84.5).....	5	10.00
Mesoprosopic (84.6-89.4).....	20	40.00
Leptoprosopic (89.5-x).....	25	50.00
Total.....	50	100.00

NASAL MEASUREMENTS AND INDICES

Nasal height	No.	Per cent	Nasal width	No.	Per cent
Short..... (x-49)	18	36.73	Very narrow..... (x-29)	3	6.12
Medium..... (50-59)	28	57.14	Medium narrow.... (30-35)	29	59.18
Long..... (60-x)	3	6.12	Medium wide..... (36-41)	17	34.69
Total.....	49	99.99	Wide..... (42-x)	0	.....
			Total.....	49	99.99

Nasal index	No.	Per cent
Leptorrhine (x-67.4).....	24	48.00
Mesorrhine (67.5-83.4).....	24	48.00
Platyrrhine (83.5-x).....	2	4.00
Total.....	50	100.00

SUMMARY

In this young group of fifty Al Sawaad tribesmen the skin was medium dark brown; the hair was very dark brown with low waves and medium in texture; the eyes were dark brown or blue-brown, the iris was homogeneous or zoned, and the sclera were clear; the nose was either straight or convex with widely divergent alae; the teeth, musculature, and health were good or excellent; the stature was medium to tall; the trunk varied from medium to very long, which would account for the increase in stature; the head and forehead were wide; the face tended to be long; and the cephalic index was mesocephalic (78.30) with extreme variations.

In order to furnish additional statistical data for comparison with those of my Iran Report and those in Part I, No. 1, of *The Anthropology of Iraq*, the following tables have been calculated:

	900-x		899-850		849-800		799-750		749-x		Totals	
Standing height	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1800-x.....	0		0		0		0		0		0	
1799-1700.....	7	14.00	8	16.00	0		0		0		15	30.00
1699-1600.....	9	18.00	18	36.00	1	2.00	0		0		28	56.00
x-1599.....	0		0		7	14.00	0		0		7	14.00
											<hr/> 50	<hr/> 100.00

Head breadth	x-99		100-109		110-119		120-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%
120-129.....	0	....	0	.....	0	.....	0	....	0	.....
130-139.....	0	....	2	4.00	7	14.00	0	....	9	18.00
140-149.....	0	....	5	10.00	17	34.00	3	6.00	25	50.00
150-x.....	0	....	0	.....	13	26.00	3	6.00	16	32.00
									50	100.00

	x-124		125-134		135-x		Totals	
Total facial length	No.	%	No.	%	No.	%	No.	%
x-114	0	....	1	2.00	1	2.00	2	4.00
115-124	1	2.00	11	22.00	18	36.00	30	60.00
125-x	0	....	6	12.00	12	24.00	18	36.00
							<hr/> 50	<hr/> 100.00

	x-63		64-69		70-75		76-81		82-x		Totals	
Total facial length	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
x-109.....	0		0		0		0		0		0	
110-119.....	3	6.00	12	24.00	1	2.00	0		0		16	32.00
120-129.....	4	8.00	10	20.00	10	20.00	2	4.00	1	2.00	27	54.00
130-x.....	0		1	2.00	3	6.00	2	4.00	1	2.00	7	14.00
											50	100.00

	x-29		30-35		36-41		42-x		Totals	
Nasal length	No.	%	No.	%	No.	%	No.	%	No.	%
x-49.....	0	....	14	28.57	4	8.16	0	....	18	36.73
50-59.....	3	6.12	14	28.57	11	22.45	0	....	28	57.14
60-x.....	0	....	1	2.04	2	4.08	0	....	3	6.12
									49	99.99

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
954	22	1755	929	200	148	110	143	113	134	74	53	35
955	40	1565	840	185	148	118	137	114	119	67	50	30
956	45	1640	906	190	164	113	140	105	127	87	63	33
957	55	1657	856	188	144	105	135	111	121	73	53	37
958	25	1640	872	179	147	115	132	105	126	77	58	32
959	20	1660	861	179	138	115	134	107	115	60	41	32
960	25	1530	829	185	135	111	128	98	119	65	44	30
961	20	1680	875	187	153	113	132	105	124	66	44	30
962	25	1691	856	191	144	122	143	106	122	63	46	35
963	22	1634	875	182	152	114	135	104	116	65	50	36
964	45	1730	895	187	147	108	138	107	121	67	50	34
965	45	1683	848	187	146	113	134	108	134	75	56	29
966	20	1663	908	182	133	105	126	103	123	68	52	27
967	25	1663	900	182	148	117	138	107	120	64	45	31
968	45	1701	878	187	146	108	121	103	123	68	49	32
969	45	1640	910	185	151	118	135	108	125	72	55	35
970	30	1674	870	194	144	109	130	110	142*	67	50	30
971	25	1678	858	188	150	115	138	98	123	78	57	36
972	22	1746	970	185	155	117	144	117	128	70	52	37
973	30	1650	880	183	143	113	131	106	114	61	41	35
974	33	1712	953	193	144	115	135	108	126	66	48	33
975	35	1778	949	193	149	119	143	114	120	65	45†	42†
976	20	1585	837	185	154	111	136	108	115	61	45	34
977	25	1745	898	187	152	118	140	116	121	75	60	36
978	25	1644	895	190	142	114	130	107	128	70	53	34
979	25	1637	865	183	133	113	130	114	115	65	49	35
980	25	1710	895	185	155	118	142	116	116	66	50	35
981	35	1683	929	189	150	111	137	107	113	66	45	35
982	30	1590	845	179	153	115	139	105	115	66	46	37
983	20	1796	922	194	143	114	133	111	115	68	50	37
984	35	1711	880	180	140	108	130	97	119	68	50	36
985	45	1745	920	187	148	119	138	109	136	79	53	31
986	23	1610	900	177	136	115	133	102	117	68	51	36
987	23	1690	892	186	161	120	140	111	127	63	44	35
988	60	1740	895	198	138	111	133	106	135	86	64	36
989	55	1602	867	181	136	105	130	103	131	75	49	33
990	45	1722	878	199	148	117	138	114	127	63	49	38
991	45	1655	885	197	148	118	139	115	123	74	55	38
992	35	1580	837	176	139	114	126	103	118	67	49	33
993	34	1614	868	186	149	118	137	105	124	61	56	37
994	25	1574	848	190	147	111	131	110	115	71	52	33
995	25	1666	878	184	139	113	134	106	124	73	58	36
996	45	1675	908	185	152	121	142	106	128	71	53	31
997	35	1735	895	195	160	124	143	108	126	67	48	36
998	33	1575	846	188	144	114	137	105	122	66	48	37
999	20	1667	865	184	143	115	137	104	128	74	54	33
1000	35	1680	907	193	151	114	141	120	122	68	55	38
1001	20	1676	870	193	155	118	139	108	119	68	53	33
1002	25	1720	915	178	145	120	139	104	121	71	53	26
1003	30	1670	910	197	144	120	140	104	130	76	54	31

* Probably too high.

† Should be omitted because the nose was broken.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
954	55	32	52.9	74.0	74.3	93.7	51.7	66.0	65.4	79.0	76.9
955	..	..	53.6	80.0	79.7	86.8	48.9	60.0	....	83.2	86.1
956	58	31	55.2	86.3	68.9	90.7	62.1	52.4	53.4	75.0	80.7
957	64	33	51.6	76.6	72.9	96.8	58.4	69.8	51.6	88.8	84.0
958	50	28	53.1	82.1	78.2	95.7	58.4	55.1	64.0	79.5	87.1
959	52	30	51.8	77.1	83.3	85.8	44.7	78.0	57.7	79.8	85.8
960	62	38	54.2	72.9	82.2	92.9	50.8	68.2	61.3	76.5	86.7
961	56	30	52.1	81.8	73.8	93.9	50.0	68.1	53.5	79.5	85.6
962	52	30	50.6	75.4	84.7	85.3	44.0	76.1	57.7	74.1	85.3
963	62	33	53.5	83.5	75.0	85.9	48.1	72.0	53.2	77.0	84.4
964	58	35	51.7	78.6	73.4	87.7	48.5	68.0	61.7	77.5	78.2
965	60	37	50.4	78.1	77.4	100.0	55.9	51.7	61.7	80.6	84.3
966	56	36	54.6	73.1	78.9	97.6	53.9	51.9	64.3	81.7	83.3
967	55	30	54.1	81.3	79.0	86.9	46.4	68.9	54.5	77.5	84.8
968	66	37	51.6	78.3	73.9	93.9	51.9	65.3	56.1	78.6	82.4
969	55	33	55.4	81.6	78.1	92.6	53.3	63.6	60.0	80.0	87.4
970	57	31	51.9	74.2	75.7	109.2*	51.5	60.0	54.4	84.6	83.8
971	55	35	51.1	79.7	76.6	89.1	56.5	63.1	63.6	71.0	83.3
972	51	34	55.5	83.8	75.4	88.8	48.6	71.1	66.6	81.2	81.2
973	57	30	53.3	78.1	79.0	87.0	46.6	85.4	52.6	80.9	86.2
974	61	40	55.6	74.6	79.8	93.3	48.8	68.7	65.5	80.0	85.2
975	56	35	53.3	77.2	79.8	83.9	45.4	93.3†	62.5	79.7	83.2
976	52	31	52.8	83.2	72.1	84.5	44.8	75.5	59.6	79.4	81.6
977	62	34	51.4	81.2	77.6	86.4	53.5	60.0	54.8	82.8	84.3
978	60	30	54.4	74.7	80.3	98.5	54.8	64.1	50.0	82.3	87.7
979	55	35	52.8	72.7	84.9	88.5	50.0	71.4	63.6	87.7	86.9
980	55	35	52.3	83.8	76.1	81.7	46.4	70.0	63.6	81.7	83.1
981	55	32	55.2	79.3	74.0	82.4	48.2	77.7	58.2	78.1	81.0
982	62	35	53.1	85.4	75.1	82.7	47.5	80.4	56.4	75.5	82.7
983	57	33	51.3	73.7	79.7	86.4	51.1	74.0	57.9	83.4	85.7
984	56	28	51.4	77.7	77.1	91.5	52.3	72.0	50.0	74.6	83.1
985	64	37	52.7	79.1	80.4	98.5	57.2	58.5	57.8	78.9	86.2
986	53	30	55.9	76.9	84.5	87.9	51.1	70.6	56.6	76.7	86.4
987	53	34	52.8	86.5	74.5	90.7	45.0	79.5	64.1	79.3	85.7
988	70	38	51.4	69.6	80.4	101.5	64.6	56.2	54.3	79.7	83.4
989	61	36	54.1	75.1	77.1	100.8	57.7	67.3	59.0	79.2	80.8
990	64	35	50.9	74.3	79.0	92.0	45.6	77.5	54.6	82.6	84.7
991	67	37	53.4	75.1	79.7	88.5	53.2	69.0	51.9	82.7	84.9
992	54	30	52.9	78.9	82.0	93.6	53.2	67.3	55.5	81.7	90.4
993	57	32	53.7	80.1	79.1	90.5	44.5	66.1	56.1	76.6	86.1
994	61	36	53.8	77.4	75.5	87.8	54.2	63.4	59.0	83.9	84.7
995	57	31	52.7	75.5	81.3	92.5	54.4	62.1	54.4	79.1	84.3
996	65	40	54.2	82.1	79.6	90.1	50.0	58.5	61.5	74.6	85.2
997	66	38	51.5	82.0	77.5	85.1	45.3	75.0	57.5	72.9	83.7
998	51	33	53.7	76.6	79.1	89.0	48.1	77.1	64.7	76.6	83.2
999	53	32	51.8	72.3	80.4	93.4	54.0	61.1	60.4	75.9	83.9
1000	66	37	53.9	78.2	75.5	86.5	48.2	69.1	56.1	85.1	80.8
1001	53	32	51.9	80.3	76.1	85.6	48.9	62.2	60.3	77.7	84.9
1002	54	32	53.2	81.4	82.8	87.0	51.1	49.1	59.2	74.8	86.3
1003	67	34	54.4	73.1	83.3	92.8	54.3	57.4	50.7	74.3	85.7

* Probably too high.

† Should be omitted because the nose was broken.

MORPHOLOGICAL CHARACTERS OF AL SAWAAD TRIBESMEN

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
954	l w	medium	black	dk br	....	....	str	cp-m
955*	...	.....	.....	dk br	clear	hom	conv	medium
956	l w	medium	blk, gray	bl-br	clear	hom	str	medium
957*	...	.....	.....	bl-br	clear	zon	conv	m-fl
958	l w	medium	black	dk br	clear	hom	conv	medium
959	l w	medium	black	dk br	clear	hom	c-c	flar
960	l w	medium	black	bl-br	clear	zon	str	medium
961	l w	medium	black	gr-br	clear	ray	conv	medium
962	l w	medium	dk br	dk br	clear	hom	str	medium
963	l w	medium	black	dk br	clear	hom	conv	medium
964	l w	medium	blk, gray	dk br	....	....	conv	medium
965	l w	coarse	blk, gray	gr-br	clear	zon	conv	comp
966	d w	coarse	black	gr-br	clear	zon	conv	comp
967	l w	medium	black	dk br	clear	ray	str	m-fl
968	l w	medium	br, gray	bl-br	clear	hom	conv	comp
969	l w	medium	br, gray	bl-br	clear	zon	str	medium
970	l w	coarse	black	bl-br	clear	hom	str	comp
971	l w	medium	black	bl-br	clear	hom	str	medium
972	d w	medium	black	gr-br	clear	ray	wavy	m-fl
973	l w	medium	black	dk br	clear	hom	str	medium
974	d w	medium	black	gr-br	clear	zon	str	medium
975	l w	medium	black	dk br	clear	hom	str	flar.
976	d w	medium	dk br	dk br	clear	hom	str	cp-m
977	l w	medium	black	bl-br	....	....	str	medium
978	l w	coarse	black	bl-br	clear	hom	str	medium
979	l w	coarse	black	bl-br	clear	zon	str	m-fl
980	l w	fine	black	bl-br	clear	zon	str	medium
981	l w	medium	black	dk br	clear	zon	conv	medium
982	l w	coarse	black	dk br	clear	zon	conv	medium
983	l w	medium	black	dk br	clear	zon	conv	m-fl
984	l w	medium	blk, gray	dk br	clear	zon	conv	comp
985	l w	fine	blk, gray	bl-br	clear	ray	wavy	medium
986	l w	medium	black	bl-br	clear	zon	str	m-fl
987	l w	medium	black	dk br	clear	zon	str	medium
988	l w	medium	gray	bl-br	blood	ray	conv	m-flar
989*	...	.....	.....	bl-br	clear	hom	conv	cp-m
990*	...	.....	.....	dk br	clear	hom	conv	medium
991	l w	coarse	black	dk br	clear	zon	conv	m-fl
992	l w	medium	black	dk br	clear	zon	str	medium
993	l w	medium	black	bl-br	blood	....	str	comp
994	l w	medium	black	dk br	clear	zon	conv	m-fl
995	l w	medium	black	gr-br	clear	hom	str	medium
996	l w	medium	black	bl-br	....	....	str	cp-m
997	l w	medium	black	dk br	clear	zon	str	comp
998	l w	medium	black	bl-br	clear	hom	conv	m-fl
999	l w	coarse	black	gr-br	clear	ray	str	medium
1000	l w	medium	black	bl-br	clear	hom	conv	m-fl
1001	l w	medium	black	gr-br	clear	zon	conv	m-fl
1002*	...	.....	.....	bl-br	clear	hom	str	cp-m
1003	l w	medium	black	bl-br	clear	hom	conv	comp

* Shaved.

MEASUREMENTS AND INDICES OF AL SAWAAD TRIBESMEN

Measurements	No.	Range	Mean	S.D.	C.V.
Age	50	20-64	33.50±1.03	10.80±0.73	32.24±2.17
Stature	50	152-181	166.98±0.55	5.73±0.39	3.43±0.23
Sitting height	50	81-98	88.78±0.30	3.15±0.21	3.55±0.24
Head length	50	176-202	187.26±0.56	5.82±0.39	3.11±0.21
Head breadth	50	126-164	145.96±0.65	6.81±0.46	4.67±0.31
Minimum frontal diameter	50	105-124	114.66±0.41	4.32±0.29	3.77±0.25
Bizygomatic diameter	50	120-149	135.90±0.47	4.90±0.33	3.61±0.24
Bigonial diameter	50	94-121	107.74±0.48	5.04±0.34	4.68±0.32
Total facial height	50	110-144	123.10±0.61	6.35±0.43	5.16±0.35
Upper facial height	50	60-89	69.50±0.55	5.75±0.39	8.27±0.56
Nasal height	49	40-67	51.38±0.47	4.92±0.34	9.58±0.65
Nasal breadth	49	25-39	33.71±0.30	3.09±0.21	9.17±0.62
Ear length	50	48-75	58.46±0.53	5.52±0.37	9.44±0.64
Ear breadth	49	26-40	33.54±0.30	3.12±0.21	9.30±0.57
Indices					
Relative sitting height	50	50-57	53.06±0.15	1.60±0.11	3.02±0.20
Cephalic	50	68-88	78.30±0.38	3.99±0.27	5.10±0.34
Fronto-parietal	50	69-86	77.86±0.32	3.39±0.23	4.35±0.29
Zygo-frontal	50	76-91	84.14±0.24	2.48±0.17	2.95±0.20
Zygo-gonial	50	69-89	79.24±0.35	3.63±0.24	4.58±0.31
Total facial	50	80-109	90.40±0.52	5.50±0.37	6.08±0.41
Upper facial	50	43-66	50.66±0.47	4.89±0.33	9.65±0.65
Nasal	49	48-87	67.06±0.56	8.24±0.56	12.29±0.84
Ear	49	50-66	50.02±0.43	4.48±0.31	8.96±0.61

THE SUBBA

Lady Drower (see Bibliography) has published a very detailed account of the history, religion, customs, folklore, and magic of the Mandeans or Subba of Iraq and Iran. The reader is referred to this standard work and to the references listed by Curzon (vol. 2, p. 306, footnote 1).

In 1892, Curzon (vol. 2, p. 305) wrote: "At Dizful, at Shushter, at Hawizeh, and at Mohammerah, are still to be found a few relics of the interesting and obscure community known as the Sabians, frequently mis-called the Christians of St. John. In former days the sectaries of this faith were very numerous in Mesopotamia; and in the seventeenth century Petis de la Croix reported 10,000 in Busrah alone. Even in 1840 Layard found 300 to 400 families in Shushter; but in 1877 Schindler only heard of 50 families on Persian soil, and of not more than 500 families elsewhere."

Birthplaces.—The following individuals gave these places of birth: Amara (Nos. 2888-2919), Halfaya (2927-2964), Majar near Amara (No. 2965), Qala Salih (Nos. 2966-2978), and the Chahala district (Nos. 2920-2926). No. 2979 had no birthplace recorded although it was probably Qala Salih.

Vital Statistics.—Unreliable as these figures must be, the general trends are probably correct. Since the Subba are a deeply religious group with whom honesty is a moving, guiding principle, unusual credence can be placed in these figures.

VITAL STATISTICS					
Brothers			Sisters		
	No.	Per cent		No.	Per cent
None.....	6	6.74	None.....	11	12.36
1.....	8	8.99	1.....	17	19.10
2.....	20	22.47	2.....	13	14.61
3-4.....	31	34.83	3-4.....	32	35.96
5-6.....	17	19.10	5-6.....	9	10.11
7 or more.....	7	7.87	7 or more.....	7	7.87
Total.....	89	100.00	Total.....	89	100.01
Sons			Daughters		
	No.	Per cent		No.	Per cent
None.....	10	18.18	None.....	9	16.36
1.....	12	21.82	1.....	17	30.91
2.....	8	14.55	2.....	8	14.55
3-4.....	16	29.09	3-4.....	17	30.91
5-6.....	8	14.55	5-6.....	1	1.82
7 or more.....	1	1.82	7 or more.....	3	5.45
Total.....	55	100.01	Total.....	55	100.00

The number of brothers and sisters recorded indicate very large families. When the age groups are taken into account, namely that 27.78 per cent were twenty-four years of age or below, the number of children is also large.

The reason for these unusually high figures in an Iraqi group is almost certainly correlated with a low incidence of infant mortality, the result of ritual ablutions and cleanliness.

No. 2898 is the son of No. 2888. No. 2897 is the brother of No. 2892.

Age.—The mean for ninety Subba was 36.70. About half of the group were from 20-34 years of age. Nos. 2974 and 2975 were omitted.

FREQUENCY DISTRIBUTION OF AGE					
Age	No.	Per cent	Age	No.	Per cent
18-19.....	5	5.56	45-49.....	2	2.22
20-24.....	20	22.22	50-54.....	9	10.00
25-29.....	13	14.44	55-59.....	10	11.11
30-34.....	11	12.22	60-64.....	2	2.22
35-39.....	8	8.89	65-69.....	2	2.22
40-44.....	6	6.67	70-x.....	2	2.22
			Total.....	90	99.99

MORPHOLOGICAL CHARACTERS OF SUBBA

Skin.—The color varied from medium light (northern European) to light tawny brown. In general, the Subba were considerably lighter in skin color than the Arabs of central and southern Iraq. Among those whom we were able to observe, the exposed parts of the body were darker than the unexposed. Individuals who were bald and whose heads were always covered by a *kaffiyah* were often as light in pigmentation as northern Europeans. There were few examples of the weather-beaten skin that is characteristic of the Al bu Muhammad tribesmen and the Beduins of northwestern Iraq.

Hair.—The Subba are distinguished from all other peoples in Iraq by the quantity of head, face, and body hair. The color varied from dark brown to black. It is probable, however, that the majority of the individuals recorded with black hair should have been classified in the very dark brown category. The rufous element was not caused by the application of henna. No Subbi possessed light hair. Gray hair was seldom noticed before the fortieth year, but in late middle age grayness was as a rule advanced.

Beards were very much in fashion, the result of religious ritual. No. 2920 (Pls. 188, 189) had a heavy beard. Although No. 2895 had dark brown hair, his beard was reddish brown. No. 2900 had a very white beard. No. 2953 had a black and reddish brown mustache.

In general, the hair was low wavy, but one man (No. 2921) was recorded in the curly-frizzly group.

HAIR

Color	No.	Per cent	Form	No.	Per cent
Black.....	34	39.08	Straight.....	0	.....
Very dark brown.....	7	8.05	Very low waves.....	0	.....
Dark brown.....	12	13.79	Low waves.....	71	89.87
Brown.....	0	.....	Deep waves.....	7	8.86
Reddish brown.....	5	5.75	Curly-frizzly.....	1	1.27
Light brown.....	0	.....	Woolly.....	0	.....
Red.....	0	.....		
Black and gray.....	22	25.29	Total.....	79	100.00
Dark brown and gray....	1	1.15			
Light brown and gray....	0	.....	Texture.....	No.	Per cent
Gray.....	5	5.75	Coarse.....	26	32.50
White.....	1	1.15	Medium-coarse.....	8	10.00
Total.....	87	100.01	Medium.....	40	50.00
			Medium-fine.....	3	3.75
			Fine.....	3	3.75
			Total.....	80	100.00

Eyes.—The light colors suggest submerged blondism.

			EYES		
Color	No.	Per cent	Iris	No.	Per cent
Black.....	0	.....	Homogeneous.....	47	54.02
Dark brown.....	5	5.56	Rayed.....	4	4.60
Blue-brown.....	66	73.33	Zoned.....	36	41.38
Blue-brown.....	14	15.56	Total.....	87	100.00
Green-brown.....	4	4.44			
Green-brown.....	0	.....	Sclera	No.	Per cent
Gray-brown.....	0	.....	Clear.....	78	88.64
Blue.....	0	.....	Yellow.....	0	.....
Gray.....	0	.....	Speckled.....	6	6.82
Light brown.....	1	1.11	Bloodshot.....	3	3.41
Blue-gray.....	0	.....	Speckled and bloodshot.....	1	1.14
Blue-green.....	0	.....	Speckled and yellow.....	0	.....
Total.....	90	100.00	Yellow and bloodshot.....	0	.....
			Total.....	88	100.01

Although five individuals (Nos. 2891, 2892, 2894, 2922, 2967) had dark brown eyes, the majority (73.33 per cent) had blue-brown eyes. Fourteen individuals had *blue*-brown eyes, and four (Nos. 2895, 2919, 2944, 2954) had green-brown eyes. No. 2976 had light brown eyes.

In general, the Subba had excellent eyes. No. 2902 attributed this to "their eating so much fish." No. 2948 had poor vision. A large white spot in the center of the pupil reduced the vision of No. 2916 to one half. No. 2921 was blind in the right eye because of a cataract that formed as a result of a flake of silver entering the eye during work.

Nose.—Thirty per cent were convex. Our observations have already indicated that this distinction is one of the most important racial criteria in Southwestern Asia. Therefore, we find two racial elements present among the Subba.

			NOSE		
Profile	No.	Per cent	Wings	No.	Per cent
Wavy.....	3	3.33	Compressed.....	14	15.56
Concave.....	1	1.11	Compressed-medium.....	16	17.78
Straight.....	48	53.33	Medium.....	35	38.89
Convex.....	27	30.00	Medium flaring.....	16	17.78
Concavo-convex.....	11	12.22	Flaring.....	9	10.00
Total.....	90	99.99	Flaring plus.....	0	.....
			Total.....	90	100.01

There were slightly more Subba with narrow than wide alae. Although nine men (10 per cent) possessed flaring nostrils, they did not appear to have Negroid blood. The general impression

retained was that the Subba possessed large, straight noses, which grew broad with advancing years.

Mouth and Teeth.—The lips showed normal eversion. The teeth presented the normal occlusion of Europeans in only 22.89 per cent of the group. The remainder, with only one exception, were recorded as having marked-over occlusion. This may be due to a general trend in the reduction of the size of the palate, the result of special food eaten by the Subba, whose diet and ritualistic ablutions form an important part of their religious expressions.

Although it was not always possible to obtain statistical data on the dental condition and the number of teeth lost, the figures recorded reveal a singular discrepancy. The few teeth lost indicate fairly good dentition.

TEETH

Bite	No.	Per cent	Condition	No.	Per cent
Under.....	0	.....	Very bad.....	0	.....
Edge to edge.....	1	1.20	Bad.....	10	22.73
Slight over.....	19	22.89	Fair.....	10	22.73
Marked over.....	63	75.90	Good.....	13	29.55
			Excellent.....	11	25.00
Total.....	83	99.99			
			Total.....	44	100.01

Loss	No.	Per cent
None.....	0	.....
1-4.....	13	68.42
5-8.....	1	5.26
9-16.....	1	5.26
17-.....	1	5.26
All.....	3	15.79
Total.....	19	99.99

The individual condition of the teeth was as follows: excellent, Nos. 2898, 2899, 2901, 2907, 2908, 2940, 2951, 2963, 2965, 2971, and 2972; good, Nos. 2891, 2895-2897, 2902, 2911, 2924, 2927, 2929, 2942, 2962, 2967, and 2979; fair, Nos. 2888, 2890, 2903, 2914, 2915, 2928, 2934, 2966, 2969, and 2978; bad, Nos. 2912, 2917, 2933, 2941, 2946, 2957, 2960, 2968, 2970, and 2977. No. 2936 had irregular front teeth. The following had lost teeth: one to four, Nos. 2923, 2925, 2930, 2931, 2934, 2944, 2945, 2950, 2954, 2958-2960, 2978; five to eight, No. 2961; nine to sixteen, No. 2941; seventeen, No. 2922; and all, Nos. 2889, 2900, and 2906.

Musculature and Health.—The health statistics were almost identical with those obtained on the muscular development.

In general musculature Nos. 2891, 2893, 2902, 2937, and 2968 were excellent, and Nos. 2941, 2948, and 2975 were fairly well developed.

MUSCULATURE		
	No.	Per cent
Poor.....	0	.....
Fair.....	5	5.56
Average.....	0	.....
Good.....	79	87.78
Excellent.....	6	6.67
Total.....	90	100.01

HEALTH		
	No.	Per cent
Poor.....	0	.....
Fair.....	5	5.56
Average.....	0	.....
Good.....	84	93.33
Excellent.....	1	1.11
Total.....	90	100.00

Disease.—Fifteen men (Nos. 2894, 2899, 2912, 2915, 2918, 2927, 2933, 2938, 2939, 2940, 2951, 2955, 2957, 2962, and 2969) bore small-pox scars.

No. 2955 had a large boil on the right hand. No. 2964 had disease scars on the head as well as many pimples (*hab shabab*) on the face.

Cauterization.—No *chawi* (*kawi*) scars were recorded on the entire group.

Tattooing.—Nine (10 per cent) of ninety individuals were tattooed, but in no case was it extensive.

TATTOOING		
Degree	No.	Per cent
None.....	5	35.71
Some.....	9	64.29
Extensive.....	0	.....
Total.....	14	100.00

Despite the fact that only fourteen men appear to have been recorded, I am confident that each man was examined and that there should have been eighty-one individuals instead of only five in the untattooed category. The following persons bore tattooed marks: Nos. 2897, 2901, 2906, 2917, 2934, 2941, 2953, 2957, and 2959.

Henna.—No. 2955 had applied henna to his fingernails and hands in order to toughen the palms for a fishing trip.

Anomalies.—No. 2939 lisped.

STATISTICAL ANALYSES OF SUBBA MALES

Stature.—The average standing height was 166.23, which is close to the mean for Southwestern Asia. According to both classificatory systems, about half of the individuals fall into the medium grouping. There are present, however, both tall (170.0–179.9) and short (x –159.9) elements. It is important to find two very tall (180.0– x) men among the Subba, who are differentiated from the Arabs of Iraq by being taller in stature. Nos. 2974 and 2975 were omitted.

STATURE

Harvard System	No.	Per cent	Keith System	No.	Per cent
Short (x –160.5).....	18	20.00	Short (x –159.9).....	15	16.66
Medium (160.6–169.4).....	41	45.55	Medium (160.0–169.9).....	46	51.11
Tall (169.5– x).....	31	34.44	Tall (170.0–179.9).....	27	30.00
			Very tall (180.0– x).....	2	2.22
Total.....	90	99.99	Total.....	90	99.99

Sitting Height (Trunk Length).—The average sitting height was 88.57 (range 80–98). It is remarkable that seventy-two men (79.99 per cent) were above 85.0 in trunk length. Nos. 2974 and 2975 were omitted. The relative sitting height was 53.30 (range 48.0–57.0).

SITTING HEIGHT (Trunk Length)

Group	No.	Per cent
Very short (x –74.9).....	0	.....
Short (75.0–79.9).....	0	.....
Medium (80.0–84.9).....	18	20.00
Long (85.0–89.9).....	34	37.77
Very long (90.0– x).....	38	42.22
Total.....	90	99.99

Minimum Frontal Diameter.—Nos. 2974, 2975, and 2979 were omitted.

MINIMUM FRONTAL DIAMETER

Group	No.	Per cent
Very narrow (x –99).....	0	.....
Narrow (100–109).....	13	14.61
Wide (110–119).....	68	74.16
Very wide (120– x).....	10	11.24
Total.....	89	100.01

Head Breadth.—The average maximum diameter was 145.75 (range 135–158). Nos. 2926, 2974, and 2975 were omitted.

HEAD BREADTH			
Group	No.	Per cent	
Very narrow (120-129).....	0	.....
Narrow (130-139).....	12	13.48	
Wide (140-149).....	57	64.04	
Very wide (150-x).....	20	22.47	
Total.....	89	99.99	

Cephalic Index.—According to both the Harvard and the Keith systems, the majority of the Subba fell into the mesocephalic category. The threefold Harvard system reveals twenty-five (28.09 per cent) dolichocephals ($x-76.5$) and eleven (12.36 per cent) in the brachycephalic ($82.6-x$) group.

The fivefold Keith system discloses an entirely different set of groupings, with the exception of the central or mesocephalic division. There were 28.09 per cent in the group $80-x$ and only 17.97 per cent in the division $x-75.0$. The fact that there were five ultrabrachycephals ($85.0-x$) and one ultradolichocephal ($x-70.0$) indicates the presence of two racial elements. In both series, No. 2926 was omitted.

CEPHALIC INDEX					
Harvard System	No.	Per cent	Keith System	No.	Per cent
Dolichocephalic.....	25	28.09	Ultradolichocephalic...	1	1.12
($x-76.5$)			($x-70.0$)		
Mesocephalic.....	53	59.55	Dolichocephalic.....	15	16.85
($76.6-82.5$)			($70.1-75.0$)		
Brachycephalic.....	11	12.36	Mesocephalic.....	48	53.93
($82.6-x$)			($75.1-79.9$)		
Total.....	89	100.00	Brachycephalic.....	20	22.47
			($80.0-84.9$)		
			Ultrabrachycephalic...	5	5.62
			($85.0-x$)		
			Total.....	89	99.99

Facial Measurements and Indices.—The wide divergence in these measurements and indices suggests racial admixture. In the facial height series, No. 2907 was omitted.

FACIAL MEASUREMENTS AND INDICES					
Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short.....	4	4.44	Short.....	3	3.37
($x-63$)			($x-109$)		
Medium short.....	22	24.44	Medium short.....	27	30.33
($64-69$)			($110-119$)		
Medium long.....	25	27.78	Medium long.....	42	47.19
($70-75$)			($120-129$)		
Long.....	39	43.33	Long.....	17	19.10
($76-x$)			($130-x$)		
Total.....	90	99.99	Total.....	89	99.99

Total facial index	No.	Per cent
Euryprosopic (x-84.5).....	12	13.48
Mesoprosopic (84.6-89.4).....	28	31.46
Leptoprosopic (89.5-x).....	49	55.05
Total.....	89	99.99

Nasal Measurements and Indices.—The wide range of variation indicates mixed racial stocks. Although the platyrrhine Subbi (No. 2960) had an index of 90, there was no evidence of Negro blood.

NASAL MEASUREMENTS AND INDICES

Nasal height	No.	Per cent	Nasal width	No.	Per cent
Short.....	13	14.44	Very narrow.....	2	2.22
(x-49)			(x-29)		
Medium.....	48	53.33	Medium narrow....	45	50.00
(50-59)			(30-35)		
Long.....	29	32.22	Medium wide.....	38	42.22
(60-x)			(36-41)		
Total.....	90	99.99	Wide.....	5	5.55
			(42-x)		
			Total.....	90	99.99

Nasal index	No.	Per cent
Leptorrhine (x-67.4).....	69	76.67
Mesorrhine (67.5-83.4).....	20	22.22
Platyrrhine (83.5-x).....	1	1.11
Total.....	90	100.00

SUMMARY

The ninety Subba of the middle-aged group were light in skin color and extremely hirsute, with very dark brown hair, which had low waves and medium texture. The eyes were brown, with definite traces of submerged blondism. The nasal profile was either straight or convex but the alae showed extreme variation. The teeth presented no unusual features except perhaps for the tendency to overbite occlusion. The musculature and health of the group seemed extremely good.

In stature the Subba were tall, the result of long trunks. The head and forehead were wide, although the bizygomatic breadth (136.05) was not unusually large. The bigonial breadth (104.66) was exceptionally narrow so that the face tended to have an ovoid or even triangular appearance. Since the upper and total facial heights were long, the cephalic index (78.39) is misleading unless examined in relation to the Keith classificatory system (p. 308). There appeared to be both dolichocephalic and brachycephalic elements present.

MINIMUM FRONTAL DIAMETER

Head breadth	x-99		100-109		110-119		120-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%
120-129.....	0	...	0	.....	0	.....	0	.....	0	.....
130-139.....	0	...	2	2.25	10	11.24	0	.....	12	13.49
140-149.....	0	...	11	12.36	44	49.44	2	2.25	57	64.05
150-x.....	0	...	0	.....	12	13.48	8	8.99	20	22.47
									89	100.01

BIZYGOMATIC BREADTH

Total facial length	x-124		125-134		135-x		Totals	
	No.	%	No.	%	No.	%	No.	%
x-114.....	1	1.12	9	10.11	4	4.49	14	15.72
115-124.....	0	.....	11	12.36	26	29.21	37	41.57
125-x.....	0	.....	12	13.48	26	29.21	38	42.69
							89	99.98

UPPER FACIAL LENGTH

Total fac. length	x-63		64-69		70-75		76-81		82-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
x-109.....	1	1.12	2	2.25	0	.....	0	.....	0	.....	3	3.37
110-119.....	3	3.37	13	14.61	8	8.99	3	3.37	0	.....	27	30.34
120-129.....	0	.....	7	7.87	13	14.61	17	19.10	5	5.62	42	47.20
130-x.....	0	.....	0	.....	4	4.49	6	6.74	7	7.87	17	19.10
											89	100.01

NASAL WIDTH

Nasal length	x-29		30-35		36-41		42-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%
x-49.....	0	.....	11	12.22	2	2.22	0	.....	13	14.44
50-59.....	1	1.11	25	27.78	20	22.22	2	2.22	48	53.33
60-x.....	1	1.11	9	10.00	16	17.78	3	3.33	29	32.22
									90	99.99

VITAL STATISTICS* OF SUBBA MALES

Number	Age	Married	Sons	Daughters	Brothers	Sisters
2888	60	1	1, 0	4, 0	0, 6	1, 0
2889	59	1	1, 0	1, 0	4, 0	0, 0
2890	47	1	2, 0	3, 0	.....	.....
2891	34	1	0, 0	2, 0	1, 0	4, 0
2892	25	0	.....	.....	7, 0	1, 0
2893	42	1	3, 0	3, 0	3, 1	1, 0
2894	20	0	.....	.....	3, 0	0, 0
2895	24	1	0, 0	0, 0	7, 0	1, 0
2896	35	1	0, 0	0, 0	2, 0	2, 0
2897	19	0	.....	.....	7, 0	1, 0
2898	32	1	1, 0	2, 0	0, 0	4, 2
2899	33	0	.....	.....	4, 0	3, 0
2900	55	1	8, 0	1, 0	3, 0	3, 0
2901	23	0	.....	.....	1, 0	3, 0
2902	27	1	0, 0	0, 0	0, 1	3, 2
2903	33	1	0, 0	1, 0	1, 4	3, 2

* Italicized numbers refer to deceased relatives.

VITAL STATISTICS* OF SUBBA MALES

Number	Age	Married	Sons	Daughters	Brothers	Sisters
2904	29	1	0, 0	0, 0	5, 0	7, 3
2905	26	1	0, 0	1, 0	2, 3	0, 0
2906	59	1	1, 4	4, 0	3, 0	0, 0
2907	26	0	....	....	5, 2	7, 4
2908	22	0	0, 0	0, 0	3, 1	0, 1
2909	34	1	1, 0	1, 0	0, 3	1, 1
2910	30	0	....	....	0, 2	1, 2
2911	20	0	....	....	3, 1	2, 2
2912	20	0	....	....	3, 3	0, 0
2913	21	0	....	....	1, 1	4, 3
2914	20	0	....	....	2, 2	1, 2
2915	42	1	2, 0	1, 0	0, 0	0, 0
2916	20	0	0, 0	0, 0	5, 2	2, 1
2917	65	1	4, 0	3, 0	1, 0	2, 1
2918	30	1	0, 1	0, 0	3, 0	2, 2
2919	38	1	3, 0	1, 0	0, 1	1, 1
2920	50	1	1, 0	1, 1	0, 0	3, 0
2921	56	1	1, 2	2, 2	4, 1	2, 0
2922	60	1	2, 2	2, 1	1, 3	2, 1
2923	70	1	2, 3	3, 1	1, 1	3, 1
2924	30	0	....	....	2, 4	2, 4
2925	39	2	2, 0	4, 3	4, 0	1, 1
2926	30	1	....	1, 0	1, 2	2, 1
2927	24	0	....	....	2, 2	2, 2
2928	35	1	0, 4	2, 1	0, 0	1, 2
2929	22	0	....	....	3, 2	2, 1
2930	50	1	1, 2	0, 2	1, 1	1, 2
2931	55	1	3, 2	2, 2	4, 2	2, 2
2932	54	1	2, 1	3, 0	2, 1	4, 0
2933	22	0	....	....	2, 0	1, 0
2934	25	0	....	....	3, 0	1, 0
2935	28	1	1, 0	0, 0	1, 1	2, 0
2936	39	1	4, 2	0, 1	3, 1	3, 0
2937	37	1	4, 1	0, 0	2, 1	1, 0
2938	19	0	....	....	2, 0	2, 2
2939	30	0	....	....	2, 1	2, 2
2940	25	0	....	....	2, 2	2, 0
2941	55	1	0, 1	2, 0	5, 2	0, 2
2942	25	0	....	....	2, 0	2, 0
2943	22	0	....	....	1, 2	1, 1
2944	30	1	0, 0	0, 0	1, 4	2, 0
2945	50	1	4, 0	1, 0	5, 0	0, 0
2946	22	0	....	....	3, 0	1, 0
2947	26	1	1, 0	1, 0	2, 0	4, 2
2948	70	1	1, 0	6, 0	2, 1	0, 0
2949	55	1	3, 0	4, 3	0, 2	4, 1
2950	55	1	1, 0	2, 1	0, 0	3, 1
2951	20	0	....	....	3, 1	1, 0
2952	55	1	3, 1	1, 3	1, 1	0, 0
2953	40	1	3, 0	3, 0	1, 0	1, 0
2954	51	1	0, 2	2, 1	1, 1	0, 0
2955	20	0	....	....	4, 1	5, 2
2956	40	1	2, 1	0, 2	1, 1	2, 1
2957	40	1	2, 0	1, 0	3, 2	2, 1
2958	50	1	4, 2	5, 3	4, 1	3, 2
2959	40	1	2, 1	3, 1	0, 2	1, 2
2960	45	1	3, 0	2, 0	2, 1	2, 1
2961	54	1	3, 2	3, 1	0, 2	1, 0

* Italicized numbers refer to deceased relatives.

VITAL STATISTICS* OF SUBBA MALES

Number	Age	Married	Sons	Daughters	Brothers	Sisters
2962	18	0	....	....	2, 1	5, 1
2963	25	0	....	....	2, 0	1, 0
2964	18	0	....	....	1, 0	1, 0
2965	24	0	....	....	0, 0	1, 0
2966	34	1	2, 0	1, 0	2, 0	7, 0
2967	23	0	....	....	6, 0	0, 0
2968	55	1	5, -	2, -	1, 6	1, 5
2969	29	1	1, 0	0, 0	4, 0	3, 0
2970	50	1	2, 0	1, 0	6, 0	1, 0
2971	18	0	....	....	3, 0	7, 0
2972	20	0	....	....	2, 0	2, 0
2973	54	1	2, 0	1, 0	1, 0	3, 0
2974	71†	1	0, 0	2, 0	0, 0	0, 0
2975	16†	0	....	....	4, 0	2, 0
2976	68	1	3, 0	1, 0	2, 0	3, 0
2977	23	0	....	....	4, 1	2, 0
2978	38	0	0, 0	1, 0	0, 4	2, 1
2979	25	0	....	....	3, 0	7, 0

* Italicized numbers refer to deceased relatives.

† Omitted from the averages because of age.

MEASUREMENTS AND INDICES OF SUBBA MALES

Measurements	No.	Range	Mean	S.D.	C.V.
Age.....	90	18-70	36.70±1.06	14.90±0.75	40.60±2.04
Stature.....	90	149-184	166.23±0.47	6.66±0.33	4.01±0.20
Sitting height.....	90	80-98	88.57±0.28	3.99±0.20	4.50±0.23
Head length.....	90	173-199	186.00±0.41	5.82±0.29	3.13±0.16
Head breadth.....	89	135-158	145.75±0.36	5.13±0.26	3.52±0.18
Minimum frontal diameter.....	89	105-136	114.58±0.36	5.08±0.26	4.43±0.22
Bizygomatic diameter.....	90	120-149	136.05±0.43	6.05±0.30	4.45±0.22
Bigonial diameter.....	89	82-121	104.66±0.42	5.88±0.30	5.62±0.28
Total facial height.....	89	105-139	122.75±0.53	7.40±0.37	6.03±0.30
Upper facial height.....	90	60-89	74.15±0.48	6.75±0.34	9.10±0.46
Nasal height.....	90	44-75	56.78±0.45	6.36±0.32	11.20±0.56
Nasal breadth.....	90	25-48	35.54±0.28	3.96±0.20	11.14±0.56
Ear length.....	90	48-79	61.14±0.37	5.24±0.26	8.57±0.43
Ear breadth.....	90	23-49	33.51±0.26	3.72±0.19	11.10±0.56
Indices					
Relative sitting height.....	90	48-57	53.30±0.12	1.62±0.08	3.04±0.15
Cephalic.....	89	68-91	78.39±0.29	4.05±0.20	5.17±0.26
Fronto-parietal.....	88	72-92	78.79±0.24	3.30±0.17	4.18±0.21
Zygo-frontal.....	88	76-99	84.18±0.23	3.16±0.16	3.75±0.19
Zygo-gonial.....	89	66-89	77.05±0.30	4.17±0.21	5.41±0.27
Total facial.....	89	75-109	90.50±0.41	5.75±0.29	6.35±0.32
Upper facial.....	90	43-66	54.68±0.33	4.65±0.23	8.50±0.43
Nasal.....	90	40-91	63.34±0.54	7.64±0.38	12.06±0.61
Ear.....	90	37-72	55.34±0.41	5.76±0.29	10.41±0.52

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
2888	60	1575	820	196	138	117	140	105	131	88	67	39
2889	59	1660	880	186	147	120	141	97	128*	82*	65	43
2890	47	1642	864	189	139	115	133	100	130	84	64	41
2891	34	1720	965	195	148	114	138	109	127	83	67	41
2892	25	1823	946	195	151	121	138	110	135	85	68	37
2893	42	1713	921	185	143	116	135	102	128	81	64	32
2894	20	1660	905	178	141	117	136	99	118	75	61	34
2895	24	1625	835	192	138	117	135	98	125	73	58	46
2896	35	1720	930	188	145	116	133	115	111	69	56	41
2897	19	1700	920	183	155	115	141	108	129	85	74	35
2898	32	1660	885	180	147	111	136	108	123	76	54	35
2899	33	1665	860	175	143	116	136	101	126	79	59	36
2900	55	1741	935	193	155	126	145	106	128*	79*	66	44
2901	23	1675	927	187	146	118	143	114	124	71	53	35
2902	27	1766	970	185	145	118	135	108	123	72	56	35
2903	33	1650	925	189	147	115	134	91	122	70	52	33
2904	29	1636	852	184	146	116	137	108	119	73	56	37
2905	26	1632	865	184	147	114	138	98	114	67	53	38
2906	59	1730	911	186	141	115	143	103	128*	81*	64	37
2907	26	1717	938	179	153	118	138	...	...	80	62	37
2908	22	1637	866	184	143	117	137	98	108	62	52	37
2909	34	1624	847	196	137	110	126	110	118	67	52	35
2910	30	1740	906	187	147	115	136	95	131	75	57	31
2911	20	1726	935	174	135	112	129	105	113	73	56	38
2912	20	1650	810	175	151	113	128	97	110	62	48	33
2913	21	1735	920	178	144	115	136	103	118	65	46	31
2914	20	1650	880	184	148	113	131	104	120	73	57	34
2915	42	1684	859	178	151	127	141	106	123	78	61	41
2916	20	1702	915	186	147	114	128	102	121	68	52	36
2917	65	1615	842	190	139	108	141	107	118	74	52	33
2918	30	1743	913	186	154	121	138	107	127	78	64	35
2919	38	1800	915	187	140	117	136	110	126	71	52	36
2920	50	1711	933	188	144	115	134	104	130	80	60	33
2921	56	1594	845	189	144	108	132	109	135	76	55	40
2922	60	1554	838	182	156	111	141	107	124	75	52	41
2923	70	1492	819	185	148	106	123	98	110	77	48	37
2924	30	1600	845	198	144	108	131	108	134	73	54	36
2925	39	1576	859	174	141	117	136	100	123	86	57	34
2926	30	1690	878	183	(121)	118	140	103	132	84	65	38
2927	24	1582	860	188	148	111	134	105	122	69	51	37
2928	35	1583	865	190	151	113	137	105	118	79	54	34
2929	22	1660	885	186	141	114	133	108	118	67	47	35
2930	50	1663	900	183	144	113	130	105	120	67	48	30
2931	55	1694	915	188	140	114	133	108	129	72	58	36
2932	54	1695	923	187	144	114	140	117	137	83	58	36
2933	22	1633	902	188	146	133†	136	99	115	63	45	34

* Shortened because edentulous.

† Questionable.

INDICES

No.	EL	EB	RSH	B/L	B/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
2888	61	33	52.1	70.4	84.8	93.6	62.8	58.2	54.1	75.0	83.6
2889	64	32	53.0	79.0	81.6	90.8	58.1	66.2	50.0	68.8	85.1
2890	61	30	52.6	73.5	82.3	97.8	63.1	64.1	49.2	75.2	86.5
2891	53	33	56.1	75.9	77.0	92.1	60.1	61.2	62.3	79.1	82.6
2892	69	34	51.9	77.4	80.2	97.8	61.6	54.4	49.3	79.2	87.7
2893	58	28	53.7	77.4	81.1	94.9	60.0	50.0	48.3	75.6	85.9
2894	60	27	54.5	79.2	83.0	86.7	55.1	55.7	45.0	72.8	86.0
2895	57	32	51.3	71.9	84.8	92.6	54.1	79.3	56.2	72.6	86.7
2896	64	34	54.0	77.2	80.0	83.5	51.9	73.2	53.1	86.5	87.3
2897	64	38	54.1	84.7	74.2	91.5	60.2	47.3	59.4	76.6	81.6
2898	61	34	53.3	81.7	75.5	90.4	55.9	64.8	55.7	79.4	81.6
2899	60	31	51.6	81.7	81.1	92.6	58.1	61.0	51.7	74.3	85.3
2900	77	41	53.7	80.3	81.3	88.3	54.5	66.7	53.2	73.1	86.9
2901	65	30	55.3	78.1	80.8	86.7	49.6	66.0	46.2	79.7	82.5
2902	66	34	54.9	78.4	81.5	91.2	53.4	62.5	51.5	80.0	87.4
2903	54	30	56.1	77.8	78.2	91.0	52.3	63.5	55.5	67.9	85.9
2904	57	33	52.1	79.4	79.5	86.9	53.3	66.0	57.8	78.8	84.6
2905	56	29	53.0	79.9	77.5	82.6	48.6	71.6	51.8	71.0	82.6
2906	57	34	52.7	75.8	81.5	89.5	56.6	57.8	59.6	72.0	80.4
2907	63	33	54.6	85.5	77.1	....	58.0	58.7	52.4	....	....
2908	65	25†	52.9	77.7	81.8	78.8	45.3	71.1	38.4†	71.6	85.4
2909	57	34	52.2	69.9	80.3	93.7	53.2	67.3	59.6	87.4	87.4
2910	59	32	52.1	78.6	78.2	96.4	55.2	54.4	54.2	69.8	84.5
2911	58	32	54.2	77.6	83.0	87.6	56.6	67.9	55.2	81.4	86.8
2912	52	31	49.1	86.2	74.9	85.9	48.4	68.8	59.6	75.8	88.3
2913	63	31	53.0	80.9	79.9	86.9	47.8	67.4	49.2	75.8	84.5
2914	50	28	53.3	80.5	76.4	91.6	55.7	59.6	56.0	79.4	86.3
2915	60	34	51.0	84.8	84.1	87.2	55.3	67.2	56.6	75.2	90.0
2916	57	33	53.3	79.0	77.6	94.5	53.1	69.2	57.9	79.7	89.1
2917	62	34	52.2	73.1	77.8	83.6	52.5	63.4	54.8	75.9	76.6
2918	53	38	52.4	82.8	78.5	92.0	56.5	54.7	71.7	77.5	87.7
2919	56	30	50.8	74.9	83.5	92.7	52.2	69.2	53.6	80.9	86.0
2920	56	30	54.5	77.6	79.9	97.0	59.7	55.0	53.6	77.6	85.9
2921	63	33	53.0	76.2	75.0	102.3	57.6	72.8	52.4	82.6	81.9
2922	68	44	53.9	85.7	71.7	88.0	53.2	78.8	64.6	75.9	78.6
2923	56	34	54.9	80.0	71.6	89.5	62.6	77.1	60.7	79.7	86.1
2924	71	33	52.8	72.7	75.0	102.3	55.8	66.7	46.4	82.5	82.5
2925	64	34	54.5	81.0	83.0	90.5	63.3	59.6	53.1	73.5	86.0
2926	62	32	52.0	....	....	94.3	60.0	58.4	51.6	73.6	84.2
2927	54	33	54.4	78.7	75.0	91.0	51.5	72.5	61.1	78.4	82.9
2928	66	36	54.6	80.0	74.9	86.1	57.7	62.9	54.5	76.6	83.2
2929	64	37	53.3	75.8	80.9	88.7	50.4	74.5	57.8	81.2	85.0
2930	66	37	54.1	78.6	78.5	92.3	51.5	62.5	56.0	80.8	86.4
2931	68	47	54.0	74.5	81.4	97.0	54.2	62.0	69.1	81.2	85.8
2932	64	36	54.5	77.0	79.2	97.9	59.3	62.1	56.3	83.6	81.4
2933	61	32	55.2	77.6	....	84.5	46.4	75.5	52.4	72.8	97.9

† Figure seems too low.

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
2934	25	1644	915	188	135	110	132	96	125	68	49	33
2935	28	1653	896	189	148	113	138	113	120	66	51	34
2936	39	1650	875	182	150	110	141	108	113	67	48	34
2937	37	1620	867	188	141	109	132	107	126	77	57	33
2938	19	1540	808	183	144	113	136	102	122	69	46	33
2939	30	1790	918	195	148	118	142	104	125	73	52	30
2940	25	1640	892	187	155	118	141	113	125	73	50	29
2941	55	1620	892	182	142	108	141	105	118	68	57	36
2942	25	1695	875	178	142	111	138	104	119	72	56	33
2943	22	1693	895	181	145	113	134	104	113	67	50	32
2944	30	1600	862	185	148	115	140	106	133	70	53	34
2945	50	1558	875	185	146	107	128	102	110	68	53	33
2946	22	1522	818	183	145	111	132	98	114	64	48	30
2947	26	1580	817	182	141	111	131	105	117	63	48	36
2948	70	1613	840	194	139	110	134	103	114	68	58	35
2949	55	1597	892	197	141	108	127	97	128	78	56	36
2950	55	1713	895	189	139	114	131	104	129	80	60	36
2951	20	1704	955	178	155	115	143	106	107	65	50	34
2952	55	1686	859	195	151	114	145	109	133	79	66	39
2953	40	1734	917	199	154	117	137	118	119	74	58	38
2954	51	1547	855	188	137	107	128	107	126	73	53	31
2955	20	1670	885	183	140	106	128	104	125	69	47	33
2956	40	1673	887	179	138	110	126	98	134	77	55	31
2957	40	1690	915	197	150	113	141	101	126	80	57	38
2958	50	1754	975	194	145	113	142	111	133	86	63	33
2959	40	1657	890	183	157	120	145	105	123	77	65	38
2960	45	1650	840	186	138	113	125	107	115	68	50	45
2961	54	1613	855	186	142	107	128	102	113	66	55	36
2962	18	1707	915	185	147	111	129	98	124	76	58	30
2963	25	1601	828	192	148	113	134	111	122	70	53	32
2964	18	1656	870	176	142	108	124	92	107	68	45	35
2965	24	1595	841	184	146	115	135	101	135	82	62	38
2966	34	1715	925	190	154	117	145	115	119	77	65	40
2967	23	1743	912	192	145	116	136	108	131	74	60	38
2968	55	1740	927	182	153	121	139	115	122	85	64	27
2969	29	1647	825	180	143	121	138	107	121	81	61	41
2970	50	1645	861	186	147	116	140	105	122	78	64	43
2971	18	1650	908	187	148	117	140	101	129	74	60	35
2972	20	1686	902	181	150	118	147	113	118	73	57	33
2973	54	1598	801	181	141	107	125	(85)	131	81	64	35
2974*	71	1652	866	185	147	118	137	104	118	73	54	37
2975*	16	1743	873	185	144	115	137	108	128	80	62	35
2976	68	1713	880	192	150	124	143	101	132	81	66	40
2977	23	1743	952	184	146	118	144	107	118	70	51	32
2978	38	1753	906	183	149	114	137	107	129	81	62	30
2979	25	1760	920	188	148	...	146	107	124	76	58	36

* Omitted from the averages because of age.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
2934	61	35	55.6	71.4	81.5	94.6	51.6	67.4	57.4	72.7	83.4
2935	60	33	54.2	78.3	76.4	87.0	47.8	66.6	55.0	81.9	81.9
2936	52	33	52.5	82.4	73.4	80.1	47.5	70.8	63.5	76.6	78.0
2937	59	37	53.5	75.0	77.4	95.5	58.3	57.9	62.6	81.0	82.6
2938	61	36	52.4	78.6	78.4	89.6	50.8	71.7	59.0	75.0	83.0
2939	56	34	51.3	75.9	79.6	88.0	51.4	57.6	60.7	73.2	83.1
2940	65	34	54.4	82.9	76.1	88.6	51.8	58.0	52.3	80.1	83.7
2941	67	36	55.1	78.0	76.0	83.6	48.2	63.1	53.7	74.5	76.6
2942	63	35	51.6	79.8	78.1	86.2	52.2	58.9	55.5	75.4	80.5
2943	60	32	52.9	80.1	77.9	84.4	50.0	64.0	53.3	77.6	84.4
2944	64	33	53.9	80.0	77.7	95.0	50.0	64.1	51.5	75.7	82.1
2945	62	44	56.1	78.9	73.3	86.0	53.1	62.3	71.0	79.6	83.6
2946	60	37	53.7	79.2	76.5	86.4	48.5	62.5	61.6	74.2	84.1
2947	51	30	51.7	77.5	78.7	89.3	48.1	75.0	58.8	80.1	84.6
2948	68	34	52.1	71.6	79.1	85.1	50.7	60.3	50.0	76.9	82.0
2949	74	36	55.9	71.5	76.6	100.8	61.4	64.2	48.6	76.4	85.0
2950	58	32	52.2	73.5	82.0	98.5	61.1	60.0	55.1	79.4	87.0
2951	60	36	56.0	87.0	74.2	74.9	45.5	68.0	60.0	74.1	80.5
2952	64	30	50.9	77.4	75.5	92.4	54.5	59.1	46.9	75.2	78.6
2953	58	33	52.9	77.4	76.0	86.9	54.0	65.5	56.9	86.1	85.4
2954	64	33	55.3	72.9	78.1	98.5	57.0	58.5	51.5	83.6	83.6
2955	64	29	53.0	76.5	75.6	97.6	53.9	70.1	45.3	81.2	82.8
2956	56	30	53.0	77.1	79.6	94.0	61.1	56.3	53.6	77.7	87.3
2957	60	33	54.1	76.1	75.4	89.4	56.7	66.6	55.0	71.6	80.1
2958	62	38	55.5	74.7	78.0	93.6	60.6	52.4	61.2	78.1	79.5
2959	61	37	53.7	85.8	76.4	84.8	53.1	58.5	60.6	72.4	82.7
2960	65	40	50.9	74.2	81.9	92.0	54.4	90.0	61.5	85.6	90.4
2961	55	35	53.0	76.3	75.4	88.3	51.5	65.5	63.6	79.7	83.5
2962	61	35	53.6	79.5	75.5	96.1	58.9	51.7	57.4	76.0	86.0
2963	60	35	51.7	77.1	76.4	90.5	52.4	60.4	58.3	82.8	84.3
2964	50	27	52.5	80.7	76.1	86.4	54.8	77.8	54.0	74.2	87.1
2965	57	34	52.7	79.4	78.8	100.0	60.7	61.3	59.7	74.9	85.2
2966	56	32	53.9	81.1	76.0	82.1	53.1	61.5	57.1	79.4	80.7
2967	63	34	52.3	75.5	80.0	96.4	54.4	63.3	54.0	79.4	85.3
2968	72	33	53.2	84.1	79.1	87.8	61.1	42.2	45.8	75.6	87.1
2969	58	35	50.1	79.4	84.7	87.7	58.7	67.2	60.3	77.5	87.7
2970	55	34	52.3	79.0	78.9	87.2	55.6	67.2	61.8	75.0	82.9
2971	64	35	55.0	79.2	79.1	92.1	52.8	58.3	54.7	72.1	83.6
2972	58	32	53.5	82.9	78.7	80.3	49.7	57.9	55.2	76.9	80.3
2973	61	34	50.1	77.9	75.9	(104.8)	64.8	54.7	55.7	68.0	85.6
2974	55	31	52.4	79.5	80.3	86.1	53.3	68.5	56.4	75.9	86.1
2975	58	26	50.1	77.9	79.9	93.4	58.4	56.5	44.8	78.9	83.9
2976	63	30	51.4	78.1	82.7	92.3	56.6	60.6	47.6	70.6	86.7
2977	58	30	54.6	79.4	80.8	81.9	48.6	62.8	51.7	74.4	81.9
2978	58	31	51.6	81.4	76.5	94.2	59.1	48.4	53.5	78.1	83.2
2979	66	33	52.2	78.7	....	84.9	52.1	62.1	50.0	73.3	....

MORPHOLOGICAL CHARACTERS OF SUBBA MALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
2888	l w	medium	gray	bl-br	speck	zon	str	flar
2889	l w	c-med	gray	bl-br	speck	zon	str	flar
2890	l w	coarse	blk, gray	bl-br	clear	hom	conv	cp-m
2891	l w	coarse	black	dk br	clear	hom	str	cp-m
2892	l w	c-med	dk br	dk br	clear	hom	conv	comp
2893	l w	coarse	blk, gray	bl-br	speck	hom	wavy	cp-m
2894	l w	coarse	black	dk br	clear	hom	str	m-fl
2895	l w	c-med	dk br	gr-br	clear	hom	str	flar
2896	l w	coarse	black	bl-br	clear	hom	str	flar
2897	l w	coarse	black	bl-br	clear	hom	conv	cp-m
2898	l w	coarse	black	bl-br	clear	hom	str	medium
2899	l w	c-med	dk br	bl-br	speck	hom	conv	m-fl
2900	l w	medium	blk, gray	bl-br	clear	zon	str	medium
2901	l w	m-fine	red br	bl-br	clear	hom	c-c	medium
2902	...	coarse	blk, gray	bl-br	clear	ray	conv	m-fl
2903	l w	c-med	red br	bl-br	clear	zon	str	medium
2904	l w	medium	dk br	bl-br	clear	hom	str	m-fl
2905*	...	.....	black	bl-br	clear	zon	str	flar
2906	l w	coarse	blk, gray	bl-br	speck	hom	str	m-fl
2907	d w	coarse	black	bl-br	clear	zon	conv	medium
2908	l w	coarse	black	bl-br	clear	hom	conv	medium
2909	l w	coarse	red br	bl-br	clear	zon	wavy	m-fl
2910*	...	.....	v dk br	bl-br	clear	hom	conv	comp
2911	d w	medium	v dk br	bl-br	clear	hom	str	flar
2912	l w	medium	v dk br	bl-br	clear	ray	conc	m-fl
2913	d w	fine	v dk br	bl-br	clear	hom	conv	comp
2914	d w	coarse	black	bl-br	clear	hom	conv	medium
2915	l w	coarse	blk, gray	bl-br	clear	hom	str	flar
2916	l w	c-med	v dk br	bl-br	clear	hom	conv	medium
2917	l w	medium	gray	bl-br	clear	zon	str	comp
2918	l w	medium	black	bl-br	clear	zon	str	comp
2919*	...	.....	red br	gr-br	clear	zon	str	cp-m
2920*	...	.....	.....	bl-br	blood	zon	conv	medium
2921	c-f	coarse	br, gray	bl-br	clear	zon	conv	m-fl
2922	l w	medium	gray	dk br	clear	.....	str	cp-m
2923	l w	medium	white	bl-br	clear	hom	str	comp
2924	l w	coarse	dk br	bl-br	clear	hom	c-c	m-fl
2925	l w	medium	blk, gray	bl-br	clear	hom	str	cp-m
2926*	...	.....	.....	bl-br	clear	hom	conv	medium
2927	l w	coarse	black	bl-br	clear	hom	conv	cp-m
2928	l w	medium	black	bl-br	clear	zon	str	medium
2929	l w	medium	black	bl-br	clear	zon	c-c	medium
2930	l w	medium	black	bl-br	clear	hom	conv	medium
2931	l w	coarse	blk, gray	bl-br	clear	hom	str	cp-m
2932*	...	.....	blk, gray	bl-br	clear	hom	conv	medium
2933	l w	fine	black	bl-br	clear	hom	c-c	medium
2934	l w	coarse	black	bl-br	clear	ray	conv	comp
2935	l w	medium	black	bl-br	clear	hom	str	medium
2936	l w	medium	black	bl-br	clear	zon	str	comp
2937	l w	medium	black	bl-br	clear	zon	str	comp
2938	l w	medium	black	bl-br	clear	zon	str	medium
2939	d w	medium	dk br	bl-br	clear	zon	str	medium
2940	l w	medium	v dk br	bl-br	clear	zon	str	comp
2941*	...	.....	blk, gray	bl-br	clear	zon	str	comp
2942	l w	medium	black	bl-br	clear	zon	str	medium
2943	l w	medium	black	bl-br	clear	hom	c-c	medium

* Shaved.

MORPHOLOGICAL CHARACTERS OF SUBBA MALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
2944	l w	medium	red br	gr-br	clear	zon	conv	medium
2945*	...	.....	black	bl-br	clear	zon	str	medium
2946	l w	fine	dk br	bl-br	clear	ray	str	medium
2947	l w	medium	v dk br	bl-br	clear	zon	str	medium
2948	l w	coarse	gray	bl-br	blood	hom	str	cp-m
2949	l w	medium	blk, gray	bl-br	.....	.....	str	medium
2950	l w	coarse	blk, gray	bl-br	clear	hom	str	cp-m
2951	l w	coarse	dk br	bl-br	clear	zon	str	medium
2952	l w	medium	blk, gray	bl-br	clear	hom	str	comp
2953	l w	medium	blk, gray	bl-br	.....	.....	str	medium
2954	l w	medium	blk, gray	gr-br	clear	zon	conv	comp
2955	l w	medium	dk br	bl-br	clear	hom	c-c	cp-m
2956	l w	medium	black	bl-br	clear	zon	str	medium
2957	l w	medium	black	bl-br	clear	hom	str	medium
2958	l w	medium	black	bl-br	clear	zon	conv	cp-m
2959	d w	medium	blk, gray	bl-br	clear	zon	str	medium
2960	l w	medium	blk, gray	bl-br	clear	zon	conv	flar
2961	l w	medium	blk, gray	bl-br	clear	zon	c-c	medium
2962	l w	medium	black	bl-br	clear	hom	c-c	m-fl
2963	l w	medium	dk br	bl-br	clear	zon	c-c	cp-m
2964	l w	medium	dk br	bl-br	clear	hom	str	m-fl
2965	l w	medium	black	bl-br	clear	hom	str	m-fl
2966*	...	.....	black	bl-br	clear	hom	str	medium
2967	l w	m-fine	dk br	dk br	clear	zon	str	m-fl
2968	l w	coarse	blk, gray	bl-br	clear	hom	str	comp
2969	l w	coarse	black	bl-br	clear	hom	conv	m-fl
2970	l w	coarse	blk, gray	bl-br	speck	hom	conv	m-fl
2971	l w	medium	black	bl-br	clear	zon	wavy	medium
2972	d w	c-med	black	bl-br	clear	zon	str	flar
2973	l w	medium	blk, gray	bl-br	clear	zon	conv	cp-m
2974†	l w	c-med	blk, gray	bl-br	clear	zon	c-c	m-fl
2975†	l w	fine	dk br	bl-br	clear	hom	str	medium
2976	l w	c-med	blk, gray	lt br	blood	hom	conv	medium
2977	l w	m-fine	black	bl-br	clear	hom	c-c	m-fl
2978*	...	.....	.....	bl-br	sp-bl	hom	conv	cp-m
2979	l w	coarse	black	bl-br	clear	hom	c-c	medium

* Shaved.

† Omitted from the averages because of age.

INDIVIDUALS OMITTED FROM THE STATISTICAL SERIES

Ten individuals were omitted from the series of averages because of age: Nos. 2980, 2982, 2988, and 2989 from Amara; Nos. 2994, 2995, 2997, 3000, and 3004 from Halfaya; and No. 3011 from Umm Saraidah.

Demography.—No. 2982 was a sister of No. 2985. No. 2988 was a daughter of No. 2987 (female) and No. 2908 (male).

Head and Facial Form.—Nos. 2994 and 3011 had very low foreheads. No. 2989 had a broader face than the average.

Hair.—The majority had dark brown hair. Two had black and one brown-gray hair. With the exception of one individual with coarse-medium hair, the texture was either medium or fine. Three individuals had straight hair, five low wavy, and one very low wavy hair.

Eyes.—Six individuals had blue-brown and four dark brown eyes. The sclera was clear except in Nos. 2995 and 3011, both of whom had bloodshot eyes. The iris was rayed in five individuals, zoned in three, and homogeneous in one. Nos. 2982, 2988, and 2989 had blue-ringed eyes.

Nose.—Only one individual had a convex profile; two had a concave profile; the remainder were straight. The alae were compressed in two individuals, flaring in four, and medium in four. No. 3004 had a depressed nasal tip. No. 2980 wore a nose-ring (*khazzamah*).

Teeth.—Five individuals had a marked-over occlusion. Two had an edge-to-edge and two a slight-over bite. Nos. 2980, 2997, 3004, and 3011 had suffered no loss of teeth, but No. 2995 had plus caries and had lost from 9 to 16 teeth. The condition of the teeth was good in Nos. 2980, 2988, 2989, and 3004. No. 2982 had excellent teeth. No. 2994 had very white teeth, while those of No. 2997 were slightly discolored and those of No. 3011 were discolored.

Musculature and Health.—Nos. 2980, 2994, 3000, and 3004 were recorded as good in both categories.

Disease.—No. 2989 bore smallpox scars. No. 2994 had scars from Baghdad boils on her right cheek. The eyes of No. 2995 were in such bad condition that they would scarcely open.

Tattooing.—Nos. 2997, 3004, and 3011 had some tattooing.

SUBBA FEMALES

Despite the small size (23) of the group, these figures, which were obtained by Miss Winifred Smeaton, are extremely important.

Nos. 2980, 2982, 2988, 2989, 2994, 2995, 2997, 3000, 3004, and 3011 have been omitted throughout the following discussions.

Birthplaces.—Amara, Nos. 2981 and 2983-2987; Chahala, Nos. 2990 and 2991; Halfaya, Nos. 2992, 2993, 2996, 2998, 2999, 3001-3003, and 3005; Qala Salih, Nos. 3008 and 3009; Huwaiza, No. 3006; Muhammera (Iran), No. 3007; and from a settled tribe living in a reed village near the Subba, No. 3010. The birthplace for No. 3012 was not given.

Vital Statistics.—The families were unusually large, coincident with a very high death rate, particularly among the males. The number of brothers (21), sisters (21), sons (16), and daughters (17) was remarkably constant.

VITAL STATISTICS

Brothers	No.	Per cent	Sisters	No.	Per cent
None.....	1	4.55	None.....	1	4.55
1.....	1	4.55	1.....	1	4.55
2.....	7	31.82	2.....	5	22.73
3-4.....	8	36.36	3-4.....	9	40.91
5-6.....	5	22.73	5-6.....	5	22.73
7 or more.....	0	.....	7 or more.....	1	4.55
Total.....	22	100.01	Total.....	22	100.02

Sons	No.	Per cent	Daughters	No.	Per cent
None.....	3	15.79	None.....	2	10.53
1.....	4	21.05	1.....	4	21.05
2.....	1	5.26	2.....	3	15.79
3-4.....	5	26.32	3-4.....	4	21.05
5-6.....	4	21.05	5-6.....	4	21.05
7 or more.....	2	10.53	7 or more.....	2	10.53
Total.....	19	100.00	Total.....	19	100.00

Nos. 2981 and 2984 were sisters whose mother was No. 3007. The relationship of No. 2985 to No. 2982 and of No. 2986 to No. 2987 was that of a sister. No. 2987 was mother of No. 2988 and wife of No. 2908. No. 3007 was also mother of No. 2907 (male).

Head Form.—No. 2990 had a low brow that sloped backward. Nos. 2993, 3005, 3008, and 3009 had a low and No. 3010 a very low brow. No. 3006 had a high vaulted head.

Age.—The average age was 35.05 (range 18-64). Nine girls were less than twenty-five years of age.

AGE DISTRIBUTION

Age	No.	Per cent	Age	No.	Per cent
18-19.....	2	8.70	45-49.....	1	4.34
20-24.....	7	30.43	50-54.....	3	13.04
25-29.....	1	4.35	55-59.....	0	.....
30-34.....	2	8.70	60-64.....	2	8.70
35-39.....	2	8.70	65-69.....	0	.....
40-44.....	3	13.04	70-x.....	0	.....
Total.....	23	100.00			

MORPHOLOGICAL CHARACTERS OF SUBBA FEMALES

Hair.—The majority (82.61 per cent) had low wavy hair.

HAIR

Color	No.	Per cent	Form	No.	Per cent
Black	7	30.43	Straight	3	13.04
Very dark brown	1	4.35	Very low waves	1	4.35
Dark brown	11	47.83	Low waves	19	82.61
Brown	0	.....	Deep waves	0	.....
Reddish brown	0	.....	Curly-frizzly	0	.....
Light brown	0	.....	Woolly	0	.....
Red	0	.....		
Black and gray	1	4.35	Total	23	100.00
Dark brown and gray	2	8.70	Texture	No.	Per cent
Light brown and gray	0	.....	Coarse	2	8.70
Gray and red brown	1	4.35	Coarse-medium	0	.....
Gray	0	.....	Medium	12	52.17
White	0	.....	Medium-fine	1	4.35
			Fine	8	34.78
Total	23	100.01	Total	23	100.00

Eyes.—Nos. 2981, 2986, 2987, and 3010 had blue-ringed eyes.

EYES

Color	No.	Per cent	Iris	No.	Per cent
Black	0	.....	Homogeneous	3	13.64
Dark brown	7	30.43	Rayed	12	54.55
Blue-brown	11	47.83	Zoned	7	31.82
Blue-brown	1	4.35			
Green-brown	1	4.35	Total	22	100.01
Green-brown	2	8.70	Sclera	No.	Per cent
Gray-brown	1	4.35	Clear	12	52.17
Blue	0	.....	Yellow	2	8.70
Gray	0	.....	Speckled	0	.....
Light brown	0	.....	Bloodshot	9	39.13
Blue-gray	0	.....	Speckled and bloodshot	0	.....
Blue-green	0	.....	Speckled and yellow	0	.....
			Yellow and bloodshot	0	.....
Total	23	100.01	Total	23	100.00

Nose.—No. 3012 had a double plus and No. 2998 a plus nasal tip. In Nos. 2992 and 3008 the tip was depressed. No. 2993 had a nasal tip that was crooked to the right.

NOSE

Profile	No.	Per cent	Wings	No.	Per cent
Wavy	0	.....	Compressed	5	21.74
Concave	2	8.70	Compressed-medium	1	4.35
Straight	12	52.17	Medium	9	39.13
Convex	8	34.78	Medium-flaring	1	4.35
Concavo-convex	1	4.35	Flaring	7	30.43
			Flaring plus	0	.....
Total	23	100.00	Total	23	100.00

Teeth.—Five individuals (Nos. 2986, 2987, 2998, 3010, and 3012) showed slight wear and two (Nos. 3001 and 3006) had caries. No.

3009 had crooked teeth and No. 3002 had very crooked, uneven teeth. No. 3003 and her children had poor teeth. No. 2986 showed wear, especially on the upper incisors. No. 2984 had a gold tooth.

TEETH

Bite	No.	Per cent	Condition	No.	Per cent
Under	0		Very bad	0	
Edge-to-edge	3	17.64	Bad	3	17.64
Slight over	8	47.06	Fair	1	5.88
Marked over	6	35.29	Good	9	52.94
			Excellent	4	23.53
Total	17	99.99	Total	17	99.99

Loss	No.	Per cent
None	8	42.11
1-4	10	52.63
5-8	0	
9-16	1	5.26
17-	0	
Total	19	100.00

Musculature.—The general musculature of eleven women was good; in one individual it was poor.

Health.—One woman was in poor health and eleven were in good health.

Disease.—Nos. 2981, 2984, and 3009 bore smallpox scars. No. 2992 had disease scars on the face. No. 3001 had lost her right eye. To "relieve headaches" Nos. 2993 and 3005 each wore a piece of bone and two coral beads in their left ear.

Tattooing.—Twelve women out of twenty were tattooed despite the fact that it was forbidden (*haram*). Among the Subba women of Halfaya, many individuals were tattooed.

STATISTICAL ANALYSES OF SUBBA FEMALES

Stature.—The average was 152.61 (range 143.0–163.0).

STATURE

Harvard System	No.	Per cent
Very small (x-139)	0	
Small (140-148)	8	34.78
Medium (149-159)	12	52.17
Tall (160-169)	3	13.04
Very tall (170-x)	0	
Total	23	99.99

SITTING HEIGHT (Trunk Length)

Group	No.	Per cent
Very short (x-68.9).....	0	.....
Short (69.0-73.9).....	0	.....
Medium (74.0-78.9).....	8	34.78
Long (79.0-83.9).....	12	52.17
Very long (84.0-x).....	3	13.04
Total.....	23	99.99

MINIMUM FRONTAL DIAMETER

Group	No.	Per cent
Very narrow (x-99).....	8	34.78
Narrow (100-109).....	14	60.87
Wide (110-119).....	1	4.35
Very wide (120-x).....	0	.....
Total.....	23	100.00

HEAD BREADTH

Group	No.	Per cent
Very narrow (120-129).....	0	.....
Narrow (130-139).....	2	8.70
Wide (140-149).....	18	78.26
Very wide (150-x).....	3	13.04
Total.....	23	100.00

CEPHALIC INDEX

Harvard System	No.	Per cent	Keith System	No.	Per cent
Dolichocephalic.....	2	8.70	Ultradolichocephalic.....	0	.....
(x-76.5)			(x-70.0)		
Mesocephalic.....	14	60.87	Dolichocephalic.....	1	4.35
(76.6-82.5)			(70.1-75.0)		
Brachycephalic.....	7	30.44	Mesocephalic.....	8	34.78
(82.6-x)			(75.1-79.9)		
Total.....	23	100.01	Brachycephalic.....	14	60.87
			(80.0-84.9)		
			Ultrabrachycephalic.....	0	.....
			(85.0-x)		
			Total.....	23	100.00

FACIAL MEASUREMENTS AND INDICES

Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short.....	1	4.35	Short.....	9	39.13
(x-63)			(x-109)		
Medium short.....	9	39.13	Medium short.....	13	56.52
(64-69)			(110-119)		
Medium long.....	8	34.78	Medium long.....	1	4.35
(70-75)			(120-129)		
Long.....	5	21.74	Long.....	0	.....
(76-x)			(130-x)		
Total.....	23	100.00	Total.....	23	100.00

Total facial index	No.	Per cent
Euryprosopic ($x-84.5$)	5	21.74
Mesoprosopic ($84.6-89.4$)	8	34.78
Leptoprosopic ($89.5-x$)	10	43.48
Total	23	100.00

NASAL MEASUREMENTS AND INDICES

Nasal height	No.	Per cent	Nasal width	No.	Per cent
Short	9	39.13	Very narrow	1	4.35
($x-49$)			($x-29$)		
Medium	14	60.87	Medium narrow	20	86.96
($50-59$)			($30-35$)		
Long	0	.....	Medium wide	2	8.70
($60-x$)			($36-41$)		
Total	23	100.00	Wide	0	.....
			($42-x$)		
			Total	23	100.01

Nasal index	No.	Per cent
Leptorrhine ($x-67.4$)	16	69.57
Mesorrhine ($67.5-83.4$)	7	30.43
Platyrrhine ($83.5-x$)	0	.....
Total	23	100.00

SUMMARY

The Subba women possessed more delicate features than their neighbors. Some of the young girls were attractive and pretty. The two main elements present are an oval-faced, almost straight-nosed type, and a square-faced, convex-nosed type. The former is represented by No. 2982 (Pl. 209), the latter by No. 3012 (Pl. 215).

The hair was dark brown with low waves and either medium or fine in texture. The eyes were brown with rayed or zoned irides and clear or bloodshot sclera. The nose was either straight or convex with a great variation in size of alae, ranging from compressed to flaring. Approximately half of the group had normal occlusion; the majority were in good condition. The muscular development and general health were good. The majority bore tattooed designs.

The stature was medium small but the trunk length was medium long, indicating that the legs tended to be short. The forehead was narrow but the head was wide. The cephalic index was brachycephalic ($80.0-84.9$), there being only one woman in the dolichocephalic ($70.1-75.0$) group. The upper facial height showed considerable variation from medium short to long, but the total facial height was medium short or short. The facial index was therefore incon-

MEASUREMENTS AND INDICES OF SUBBA FEMALES

Measurements	No.	Range	Mean	S.D.	C.V.
Age	23	18-64	35.05±1.98	14.05±1.40	40.09±3.99
Stature	23	143-163	152.61±0.75	5.31±0.53	3.48±0.35
Sitting height	23	72-89	79.90±0.49	3.48±0.35	4.36±0.43
Head length	22	170-187	177.81±0.63	4.35±0.44	2.45±0.25
Head breadth	22	135-152	143.08±0.51	3.57±0.36	2.50±0.25
Min. frontal diam.	23	93-112	101.82±0.61	4.36±0.43	4.28±0.43
Bizygomatic diameter	23	120-139	126.55±0.62	4.40±0.44	3.48±0.35
Bigonial diameter	22	74-105	94.42±0.92	6.40±0.65	6.78±0.69
Total facial height	23	100-124	111.55±0.80	5.70±0.57	5.11±0.51
Upper facial height	23	60-79	70.50±0.64	4.55±0.45	6.45±0.64
Nasal height	23	44-59	51.06±0.59	4.20±0.42	8.23±0.82
Nasal breadth	23	28-39	32.90±0.26	1.86±0.18	5.65±0.56
Ear length	22	56-71	62.22±0.56	3.92±0.40	6.30±0.64
Ear breadth	23	29-40	33.39±0.36	2.55±0.25	7.64±0.76
Indices					
Relative sitting height	23	50-57	52.42±0.19	1.38±0.14	2.63±0.26
Cephalic	22	74-85	80.31±0.41	2.85±0.29	3.55±0.36
Fronto-parietal	23	66-80	70.90±0.44	3.12±0.31	4.40±0.44
Zygo-frontal	23	72-87	80.82±0.39	2.80±0.28	3.46±0.34
Zygo-gonial	22	60-80	74.77±0.63	4.41±0.45	5.90±0.60
Total facial	23	80-99	88.50±0.64	4.55±0.45	5.14±0.51
Upper facial	23	46-66	56.27±0.56	3.96±0.39	7.04±0.70
Nasal	23	56-79	65.66±0.69	4.92±0.49	7.49±0.75
Ear	22	41-64	53.94±0.66	4.56±0.46	8.45±0.86

VITAL STATISTICS* OF SUBBA FEMALES

Number	Age	Married	Years	Sons	Daughters	Brothers	Sisters
2981	20	0	..	...	...	5, 0	6, 0
2982†	15	0	..	...	...	1, 1	2, 3
2983	30	1	18	2, 1	3, 1	1, 1	2, 0
2984	23	1	2	0, 0	0, 0	5, 0	6, 1
2985	18	0	..	...	...	1, 1	2, 3
2986	50	1	30	4, 8	0, 1	0, 2	3, 0
2987	40	1	28	1, 4	4, 1	0, 2	3, 0
2988†	12	0	..	...	...	1, 4	3, 0
2989†	16	0	..	...	...	2, 3	3, 1
2990	19	0	..	...	...	2, 3	1, 1
2991	22	1	6	1, 0	1, 0	4, 1	0, 0
2992	22	0	..	...	...	3, 1	4, 1
2993	40	1	29	3, 4	3, 3	0, 1	1, 4
2994†	14	0	..	...	...	2, 1	3, 0
2995†	80	1	..	1, 3	1, 3	0, 5	2, 2
2996	20	1	10	1, 0	1, 0	2, 0	3, 0
2997†	15	0	..	...	...	2, 1	1, 1
2998	40	1	..	4, 2	4, 3	1, 2	3, 1
2999	20	1	5	0, 0	2, 0	4, 2	1, 1
3000†	12	0	..	...	...	0, 0	2, 1
3001	60	1	..	2, 2	2, 0	2, 0	0, 2
3002	21	1	6	0, 0	0, 1	2, 1	3, 1
3003	38	1	..	3, 1	4, 1	1, 2	4, 5
3004†	14	0	..	...	...	1, 4	1, 4
3005	28	1	..	0, 1	4, 4	1, 1	1, 1
3006	32	1	..	3, 1	1, 2	0, 0	1, 0
3007	50	1	..	2, 0	2, 0	0, 3	3, 0
3008	50	1	12	3, 3	2, 1	0, 0	0, 0
3009	35	1	15	4, 1	0, 4	3, 1	1, 2
3010	45	1	..	0, 1	0, 0	0, 3	1, 2
3011†	16	0	..	...	...	3, 0	1, 5
3012	60	1	..	3, 1	3, 2	3, 0	3, 0

* Italicized numbers refer to deceased relatives.

† Omitted from averages because of age.

MEASUREMENTS OF SUBBA FEMALES

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
2980*	14	1527	794	171	139	105	124	90	105	68	50	34
2981	20	1580	870	175	144	106	132	103	117	74	56	34
2982*	15	1568	821	176	144	101	127	93	108	68	47	30
2983	30	1539	778	182	144	100	121	95	112	72	52	34
2984	23	1618	844	178	141	111	135	100	124	78	55	38
2985	18	1567	796	177	146	106	125	93	102	64	48	31
2986	50	1534	798	179	150	105	132	98	115	69	52	32
2987	40	1542	821	176	143	103	129	100	116	77	54	31
2988*	12	1445	743	176	146	100	124	92	113	69	46	30
2989*	16	1541	748	183	150	108	132	94	100	57	40	33
2990	19	1609	848	174	137	97	125	87	114	69	52	32
2991	22	1470	768	176	148	100	127	88	102	60	46	32
2992	22	1546	800	170	144	102	124	88	110	73	54	35
2993	40	1483	791	176	143	97	121	90	109	70	50	32
2994*	14	1506	799	169	145	103	125	92	97	58	41	34
2995*	80	1329	700	178	151	99	118	...	110	66	52	34
2996	20	1464	752	176	143	108	129	102	105	67	47	36
2997*	15	1502	805	169	145	100	125	96	115	74	52	39
2998	40	1533	766	187	143	97	120	96	109	74	49	33
2999	20	1499	780	171	142	102	128	93	111	68	44	33
3000*	12	1467	764	166	130	92	117	86	101	64	51	31
3001	60	1484	794	181	150	104	129	...	109	73	57	35
3002	21	1620	837	185	145	101	121	92	118	79	55	33
3003	38	1571	817	182	140	98	120	93	117	70	50	33
3004*	14	1496	744	176	140	100	123	99	110	70	52	31
3005	28	1461	771	184	138	104	125	97	117	74	50	32
3006	32	1455	830	177	140	93	122	76	107	66	45	29
3007	50	1517	798	176	142	99	127	94	119	76	56	34
3008	50	1451	745	175	143	102	123	(97)	102	67	48	33
3009	35	1485	779	170	141	94	126	94	110	69	46	33
3010	45	1549	801	179	141	98	128	99	106	66	47	33
3011*	16	1517	816	173	141	97	126	91	106	63	43	31
3012	60	1525	825	(182)†	(152)†	109	136	105	119	76	57	33

* Omitted from averages because of age.

† Did not remove headdress.

NOTES ON THE BANI LAM

The Bani Lam are a numerous and important tribe, who cultivate the wheat and barley fields on either side of the Tigris. Their territory extends to the Iranian frontier from the neighborhood of Badra to Hawiza. In the early months of the year, the tribe is to be found chiefly in the grazing lands below the Iranian foothills.

The Bani Lam are divided into innumerable sections, only one of which, the Nusairi, is purely Bani Lam. The other sections are made up of foreign tribes, chiefly Bani Rabiah and Iranian, who from time to time have joined and finally become subjects of the Bani Lam. The Nusairi Section is divided into small groups, all of which have been named after the descendants of Nusairi's and Nasar's sons. The chiefs of the tribe have always been selected from four *Baits*: Madhkur, Arar, Jandal, and Abdul Khan. Unlike

INDICES OF SUBBA FEMALES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
2980	59	30	51.9	81.3	75.5	84.7	54.8	68.0	50.9	72.6	84.7
2981	61	30	55.1	82.3	73.6	88.6	56.1	60.6	49.1	78.0	80.4
2982	60	35	52.4	81.4	70.1	85.0	53.6	63.8	58.3	73.2	79.5
2983	64	30	50.5	79.1	69.5	92.5	59.5	65.4	46.8	78.5	82.6
2984	64	33	52.2	79.1	78.7	91.9	57.8	69.1	51.6	74.0	82.2
2985	60	31	50.8	82.5	72.6	84.8	51.2	64.5	51.6	74.4	84.9
2986	65	40	52.0	83.9	70.0	87.1	52.3	61.5	61.5	74.3	79.5
2987	57	35	53.2	81.2	72.0	90.0	59.7	57.4	61.4	77.5	79.9
2988	55	34	51.4	83.0	68.5	91.1	55.6	65.1	61.7	74.1	80.6
2989	60	30	48.5	82.0	72.0	75.7	43.2	82.5	50.0	71.2	81.9
2990	58	32	52.7	78.7	70.8	91.2	55.2	61.5	55.2	69.6	77.6
2991	61	32	52.2	84.1	67.6	80.3	47.2	69.6	52.5	69.3	78.7
2992	59	31	51.7	84.7	70.8	88.7	58.9	64.8	52.5	71.0	82.3
2993	59†	34†	53.3	81.3	67.8	90.1	57.9	64.0	57.6	74.4	80.2
2994	55	31	53.0	85.8	71.0	77.6	46.4	82.9	56.4	73.6	82.4
2995	64	34	52.6	84.8	65.6	93.2	55.9	65.4	53.1	...	83.9
2996	60	32	51.3	81.3	75.5	81.4	51.9	76.6	53.3	79.1	83.7
2997	60	32	53.6	85.8	69.0	92.0	59.2	63.5	53.3	76.8	80.0
2998	67	35	49.9	76.5	67.8	90.8	61.7	67.4	52.2	80.0	80.8
2999	69	29	52.0	83.0	71.8	86.7	53.1	75.0	42.0	72.7	79.7
3000	57	30	52.1	78.3	70.8	86.3	54.7	60.8	52.6	73.5	78.6
3001	69†	37	53.5	82.9	69.3	84.5	56.6	61.4	53.6	...	80.6
3002	(65)	34	51.6	78.4	69.7	97.5	65.3	60.0	...	76.0	83.5
3003	60	33	52.0	76.9	70.0	97.5	58.3	66.0	55.0	77.5	81.7
3004	61	36	51.1	79.6	71.4	89.4	56.9	59.6	59.0	80.5	81.3
3005	58	31	52.7	75.0	75.4	93.6	59.2	64.0	53.5	77.6	83.2
3006	67	35	57.0	79.1	66.4	87.7	54.1	64.4	52.2	62.3	76.2
3007	66	36	52.6	80.6	69.6	93.6	59.8	60.6	54.5	74.0	78.0
3008	59	35	51.3	81.7	71.3	82.9	54.5	68.8	59.3	78.9	82.9
3009	56	33	52.4	82.9	66.7	87.3	54.8	71.7	58.9	74.6	74.6
3010	64	34	51.7	78.8	69.5	82.8	51.6	70.1	53.1	77.4	76.5
3011	62	32	53.7	81.5	68.8	84.1	50.0	72.1	51.6	72.2	77.0
3012	62	35	53.4	83.5	71.7	87.5	55.9	57.9	56.5	77.2	80.2

† Right ear measured.

‡ Ear lobe stretched by earrings.

those of the Al bu Muhammad, the *Baits* have retained their original names.

They relate that some twelve generations back, Barrak, son of Mufarrij and one of the grandsons of Lam ibn Harithah, from whom they take their name and who was a chief of the Qahtan tribe of the Hejaz, migrated with his son, Hafidh al Lami, to Iraq and settled in Hawiza. Mubarak, chief of the Hawiza district, welcomed them as his guests and subjects. After a time Hafidh had a quarrel with Mubarak, resulting in an outbreak of war. Hafidh, who had earned for himself a reputation for justice, was supported by some of the present foreign tribes of the Bani Lam (Chaab, Darraj, Khazraj, and Hallaf). These were subjects of the Bani Rabiah, whose seat was between Kut al Imara and Al Qurna. Hafidh was victorious and after his occupation of the land the Bani Rabiah used to come yearly

MORPHOLOGICAL CHARACTERS OF SUBBA FEMALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
2980*	str	c-med	dk br	dk br	clear	ray	str	flar
2981	lw	m-fine	dk br	dk br	yellow	zon	conv	comp
2982*	lw	medium	black	dk br	clear	zon	conv	comp
2983	lw	fine	dk br	dk br	clear	zon	str	m-fl
2984	lw	medium	dk br	gr-br	clear	zon	str	medium
2985	lw	fine	dk br	dk br	clear	zon	conv	comp
2986	v lw	fine	dk br	dk br	blood	zon	conv	comp
2987	lw	fine	black	gray-br	blood	ray	conv	cp-m
2988*	str	fine	dk br	dk br	clear	zon	str	medium
2989*	lw	fine	dk br	dk br	clear	zon	conc	medium
2990	str	coarse	black	bl-br	clear	ray	str	flar
2991	lw	medium	dk br	dk br	clear	ray	conc	medium
2992	str	medium	dk br	bl-br	blood	ray	str	flar
2993	lw	medium	black	bl-br	clear	ray	str	medium
2994*	lw	fine	black	bl-br	clear	ray	conc	flar
2995*	...	medium	br, gray	bl-br	blood	...	str	comp
2996	str	medium	black	dk br	clear	ray	str	flar
2997*	str	medium	dk br	bl-br	clear	ray	str	medium
2998	lw	medium	dk br	bl-br	clear	...	c-c	flar
2999	lw	fine	black	bl-br	clear	ray	conv	flar
3000*	lw	fine	dk br	bl-br	clear	hom	str	flar
3001	lw	coarse	br, gray	bl-br	clear	ray	conv	medium
3002	lw	medium	dk br	bl-br	blood	hom	str	medium
3003	lw	fine	dk br	bl-br	clear	ray	str	medium
3004*	v lw	fine	dk br	bl-br	clear	ray	str	medium
3005	lw	medium	black	gr-br	blood	ray	conc	comp
3006	lw	fine	dk br	gr-br	clear	ray	str	medium
3007	lw	medium	red br, gray	bl-br	yellow	zon	conv	medium
3008	lw	medium	blk, gray	bl-br	blood	hom	str	flar
3009	lw	fine	black	bl-br	blood	ray	str	flar
3010	lw	medium	v dk br	dk br	blood	zon	str	medium
3011*	lw	medium	dk br	bl-br	blood	ray	str	flar
3012	lw	medium	br, gray	bl-br	blood	hom	conv	comp

* Omitted from averages because of age.

to collect their revenue. Hafidh, however, refused to pay. In the war that ultimately broke out, Hafidh and his subjects defeated the Bani Rabiha and they became the sole owners of the land, which included the Amara district and part of the Muntafiq. Hafidh had two sons, from whom the pure Bani Lam stock originated.

Circumstances did not allow us to obtain anthropometric data on the Bani Lam. On April 27, 1934, however, we paid a brief visit to the black tents of Sheikh Shabib of the Hamra sub-tribe of the Bani Lam near Halfaya. As we sipped black coffee we were informed that the tribal mark (*wasm*) on the camels of the Balasim was two short parallel lines on each side of the right eye. The Khafaya cut a v-shaped piece out of the right ear, and the Ghanan split the camel's ear in two parts. (For additional information on the Bani Lam see Field, 1939a.)

IV. ANTHROPOMETRIC DATA FROM AN NASIRIYA¹ LIWA

BY

WINIFRED SMEATON²

The An Nasiriya male series, examined during March, 1935, in the prison, includes townsmen and men of uncertain tribes from An Nasiriya, Suq ash Shuyukh, Qalat Sikar, Karradi, and Bat-ha, and members of settled tribes, *fallahin* and *madan*, from the Muntafiq *Liwa* generally, or an area roughly from Rumaitha on the Euphrates and a corresponding point on the western branch of the Euphrates down through An Nasiriya to Suq ash Shuyukh and Chabaish on the Hor al Hammar and north along the river that flows south from Kut al Imara under the name of Hai, Gharraf, and Shatra as far as Hai. This series comprises 109 individuals, including one townsman from An Nasiriya who was measured in the Royal Hospital at Baghdad.

The total number measured in An Nasiriya prison was 125 individuals.

Tribe or Birthplace.—The following information was recorded on each individual.

In this chapter minor variations in the spellings of tribal and place names occur.

No.	Tribe	District
4290.....	Bani Said.....	Chabaish
4291.....	Hachcham.....	Shamiya
4292.....	Hachcham.....	Near Samawa
4293.....	Dabbat.....	Shatra
4294.....	Shirahna.....	Qalat Sikar
4295.....	Hisan.....	Suq ash Shuyukh
4296.....	Ghuzi.....	Bat-ha
4297.....	Dabbat.....	Shatra
4298.....	Al bu Hamza.....	Qalat Sikar
4299.....	Bani Ukhtait.....	Hor al Hammar
4300.....	Khafaya (Khafaja).....	Shatra
4301.....	Arab (non-tribal).....	An Nasiriya
4302.....	Juwaibir.....	Suq ash Shuyukh
4303.....	Ghuzi.....	An Nasiriya
4304.....	Bani Zaid.....	Shatra
4305.....	Diyain (Dijain).....	Suq ash Shuyukh
4306.....	Uzairij.....	An Nasiriya
4307.....	Humaidat.....	Qalat Sikar
4308.....	Uzairij.....	An Nasiriya
4309.....	Arab (non-tribal).....	Suq ash Shuyukh

¹ Now Muntafiq.

² Member of Field Museum Anthropological Expedition to the Near East, 1934. This group forms a welcome addition to our series from Iraq, particularly since they are the only anthropometric data available from the An Nasiriya *Liwa*. (H.F.)

No.	Tribe	District
4310.	Khafaya (Khafaja)	Basra
4311.	Nejdi	Suq ash Shuyukh
4312.	Arab (non-tribal)	An Nasiriya
4313.	Arab (non-tribal)	An Nasiriya
4314.	Al bu Sali	An Nasiriya
4315.	Bani Attab	Near Karradi
4316.	Juwaibir	Suq ash Shuyukh
4317.	Bani Musharraf	Chabaish
4318.	Hachcham	Suq ash Shuyukh
4319.	Arab (non-tribal)	An Nasiriya
4320.	Shuwalish	Suq ash Shuyukh
4321.	Bani Said	
4322.	Dabbat	
4323.	Khafaya (Khafaja)	Karradi
4324.	Hawal	Near Chabaish
4325.	Hisan	Suq ash Shuyukh
4326.	Juwaibir	
4327.	Khafaya (Khafaja)	Shatra
4328.	Juwaibir	
4329.	Al Akaika	Suq ash Shuyukh
4330.	Khafaya (Khafaja)	
4331.	Al bu Khalifa	Suq ash Shuyukh
4332.	Hachcham	Qalat Sikar
4333.	Hachcham	
4334.	Hachcham	
4335.	Arab (non-tribal)	Bat-ha
4336.	Al bu Sali	Abu Zuruq
4337.	Bani Said	Suq ash Shuyukh
4338.	Ghuzi	
4339.	Husainat	
4340.	Hachcham	Qalat Sikar
4341.	Juwaibir	
4342.	Hachcham	
4343.	Qaraghol	Shatra
4344.	Dabbat	
4345.	Hachcham	Samawa
4346.	Hammad	Qalat Sikar
4347.	Dabbat	
4348.	Dabbat	
4349.	Nawashi (Dugaimi)	Gharraf
4350.	Juwaibir	
4351.	Ghariafiya	Suq ash Shuyukh
4352.	Arab (non-tribal)	Suq ash Shuyukh
4353.	Hisan	
4354.		Suq ash Shuyukh
4355.	Arab (non-tribal)	Suq ash Shuyukh
4356.	Kurmashia	Suq ash Shuyukh
4357.	Bani Said	
4358.	Qaraghol	Shatt al Ahmar
4359.	Arab (non-tribal)	Suq ash Shuyukh
4360.	Abuda	Shatra
4361.	Uzairij	
4362.	Dabbat	
4363.	Serai	Karradi
4364.	Shuwailat	Qalat Sikar
4365.	Khafaya (Khafaja)	
4366.	Bani Said	
4367.	Salman	Qadhat al Hai
4368.	Khafaya (Khafaja)	
4369.	Hawal	Suq ash Shuyukh
4370.	Khafaja	

No.	Tribe	District
4371.....	Khafaja	
4372.....	Arab (non-tribal).....	Qalat Sikar
4373.....	Khafaja	
4374.....	Badr	
4375.....	Khafaja	
4376.....	Khafaja	
4377.....	Khafaja	
4378.....	Khafaja	
4379.....	Marshadi.....	Qalat Sikar
4380.....	Dabbat	
4381.....	Al Khalil.....	An Nasiriya
4382.....	Juwaibir	
4383.....	Zaiyad	
4384.....	Khafaja.....	Suq ash Shuyukh
4385.....	Bani Said.....	Suq ash Shuyukh
4386.....	Dabbat	
4387.....	Shuwailat.....	Qalat Sikar
4388.....	Khafaja	
4389.....	Khafaja	
4390.....	Khafaja	
4391.....	Majid.....	Suq ash Shuyukh
4392.....	Husainat	
4393.....	Husainat	
4394.....	Khafaja	
4395.....	Shadud.....	Suq ash Shuyukh
4396.....	Khafaja.....	Mushakhil (tribal section)
4397.....	Hachcham.....	Suq ash Shuyukh
4398.....	Arab (non-tribal).....	An Nasiriya

Age.—The mean age was 31.54 (range 15–75). This group, selected by most random sampling, should be fairly representative of the peoples of this area.

AGE DISTRIBUTION

Age	No.	Per cent	Age	No.	Per cent
15–19.....	8	7.34	45–49.....	5	4.59
20–24.....	18	16.51	50–54.....	3	2.75
25–29.....	25	22.94	55–59.....	1	0.92
30–34.....	18	16.51	60–64.....	0	.....
35–39.....	19	17.43	65–69.....	1	0.92
40–44.....	9	8.26	70–x.....	2	1.84
			Total.....	109	100.01

Vital Statistics.—Unreliable as these figures must be, because of the fear, superstitious beliefs, and innate reticence in confiding family matters to foreigners, the general trends are of value.

VITAL STATISTICS

Sons	No.	Per cent	Daughters	No.	Per cent
None.....	17	34.00	None.....	17	34.69
1.....	18	36.00	1.....	17	34.69
2.....	10	20.00	2.....	10	20.41
3–4.....	4	8.00	3–4.....	4	8.16
5–6.....	1	2.00	5–6.....	1	2.04
7 or more.....	0	.....	7 or more.....	0	.....
Total.....	50	100.00	Total.....	49	99.99

About one-third of the group disclaimed any sons or daughters. There were thirty-three male children and thirty-two females. No. 4386 had two children but the sex was not recorded. No. 4381 was married but the number of children was uncertain.

MORPHOLOGICAL CHARACTERS OF AN NASIRIYA MALES

Physical Appearance.—No. 4299 was recorded as a good type, but No. 4359 was described as a poor specimen. No. 4322 had pointed ears. No. 4313 was very thin, while No. 4330 had a prison pallor and appeared pathetic. No. 4358 had a ridge above the nape of his neck. No. 4396 was recorded as an "absolute Mephistopheles."

Head Form.—No. 4295 had a flat occiput. No. 4319 had an extremely high vault and No. 4392 had a flat area on the occiput.

Supra-orbital Ridges.—No. 4347 had very well-developed supra-orbital ridges; those of Nos. 4291, 4376, and 4391 were well developed.

Facial Form.—No. 4352 had a narrow face and prominent malars. No. 4367 had a small face.

Prognathism.—Nos. 4392 and 4298 had facial prognathism, No. 4355 had alveolar prognathism, and Nos. 4356 and 4358 were indicated as having some degree of prognathism.

Negroid Admixture.—No. 4356, with a large admixture of Negroid blood, had everted lips, prognathism, and, although his head was shaven, probably had frizzly hair. No. 4298 was indicated as having possibly a slight admixture of Negroid blood.

Skin.—No. 4351 had a slightly florid and fairer complexion than that of the other individuals. Nos. 4337, 4338, 4358, and 4373 had dark and Nos. 4364, 4367, 4385, and 4392 had very dark skins.

HAIR

Color	No.	Per cent	Form	No.	Per cent
Black.....	15	27.27	Straight.....	1	5.88
Very dark brown.....	0		Very low waves.....	0	
Dark brown.....	26	47.27	Low waves.....	16	94.12
Brown.....	0		Deep waves.....	0	
Reddish brown.....	0		Curly-frizzly.....	0	
Light brown.....	0		Woolly.....	0	
Red.....	0				
Black and gray.....	7	12.73	Total.....	17	100.00
Dark brown and gray.....	8	5.45			
Light brown and gray.....	0		Texture	No.	Per cent
Gray.....	4	7.27	Coarse.....	20	68.97
White.....	0		Coarse-medium.....	0	
Total.....	55	99.99	Medium.....	9	31.03
			Medium-fine.....	0	
			Fine.....	0	
			Total.....	29	100.00

Hair.—Twenty-one men or more than 18 per cent had mustaches. Five men wore beards. No. 4390 had a beard lighter than his head hair. The beard of No. 4392 was deep wavy and coarse, although his hair was fine.

Eyes.—The eyes of No. 4315 were so badly filmed that the eye color was not discernible. The eyes of No. 4358 were slightly filmed, and those of No. 4307 were filmed. No. 4305 had bluish filmed eyes. The right eye of No. 4398 was filmed. Nos. 4293 and 4342(?) had filmed spots in their left eyes. No. 4293 said he could see well.

Nos. 4380, 4384, and 4398 had lost their right eyes. No. 4307 had his left eye turned inward and No. 4347 was cross-eyed.

No. 4353 had very small and No. 4391 deep-set and small eyes. No. 4332 had a white spot in the retina of his eye, while No. 4359 had maturation in his eyes.

Twenty individuals had blue-ringed eyes, while twelve had darker rings around the iris. Nos. 4321, 4324, 4329, and 4429 had gray-ringed eyes.

EYES

Color	No.	Per cent	Sclera	No.	Per cent
Black.....	1	0.93	Clear.....	27	26.21
Dark brown.....	95	87.96	Yellow.....	6	5.83
Blue-brown.....	0	.....	Speckled.....	0	.....
Blue-brown.....	0	.....	Bloodshot.....	64	62.14
Green-brown.....	4	3.70	Speckled and bloodshot.....	2	1.94
Green-brown.....	0	.....	Speckled and yellow.....	0	.....
Gray-brown.....	5	4.63	Yellow and bloodshot.....	4	3.88
Blue.....	0	.....		
Gray.....	0	.....	Total.....	103	100.00
Light brown.....	3	2.78			
Blue-gray.....	0	.....		
Blue-green.....	0	.....		
Total.....	108	100.00			

Nose.—Nos. 4355 and 4378 had short noses and No. 4366 a very short nose. The noses of Nos. 4347 and 4363 were small. While the nasal bridge of No. 4394 was high and narrow and that of No. 4316 high, No. 4338 had a low and broad bridge. His nose was swollen and sore. No. 4359 had a long and No. 4380 a long and narrow nose. The noses of Nos. 4305 and 4318 were broad throughout, while that of No. 4336 was broad only above the alae. Nos. 4306, 4307, 4310, 4314, and 4315 had broad noses. Those of Nos. 4313 and 4332 were very broad.

The variability in the nasal profile, in the width of the nasal alae, and in the elevation of the nasal tip suggests that at least two distinct elements are present in this assorted group of individuals from the An Nasiriya *Liwa*.

NOSE

Profile	No.	Per cent	Wings	No.	Per cent
Wavy.....	0	.....	Compressed.....	12	11.11
Straight.....	22	20.18	Compressed-medium....	6	5.55
Concave.....	25	22.94	Medium.....	46	42.59
Convex.....	48	44.04	Medium-flaring.....	13	12.04
Concavo-convex.....	14	12.84	Flaring.....	31	28.70
			Flaring plus.....	0	.....
Total.....	109	100.00	Total.....	108	99.99

Tip Elevation	No.	Per cent
Elevated.....	8	18.60
Slightly elevated.....	5	11.63
Horizontal.....	0	.....
Slightly depressed.....	17	39.53
Depressed.....	13	30.23
Total.....	43	99.99

DESCRIPTION OF NASAL SEPTUM

No.	Septum	Inclination	Elevation
4290	conc	slight up	dep
4291	str	.....	slight elev
4292	str	slight up	slight dep
4293	conv	up	slight dep
4294	conv	up	slight dep
4295	conv	up	elev
4296	conv	up	elev
4297	conv	up	dep
4298	str	up	elev
4299	str	up	dep
4300	str	down	dep
4301	str	up	slight elev
4302	str	slight up	slight dep
4303	str	up	elev
4304	conv	up	elev
4305	str	slight down	dep
4306	conv	up	slight elev
4307	str	up	slight dep
4308	str	up	dep
4309	str	up	dep
4310	str	up	slight dep
4311	str	slight up	dep
4312	..	.....	slight dep
4313	str	up	slight dep
4314	str	slight up	dep
4315	..	.....	dep
4316	str	slight up	slight elev
4317	conv	slight up	elev
4318	str	slight up	slight dep
4319	conv	up	slight dep
4320	....	.....	slight dep
4321	....	.....	slight dep
4322	....	.....	dep
4323	str	slight up	slight dep
4324	conv	up	slight elev
4325	str	up	slight dep
4326	conv	up	elev
4327	conv	down	dep
4328	str	slight up	slight dep

No.	Septum	Inclination	Elevation
4329	conv	up	slight dep
4330	conv	up	dep
4331	conv	up	elev
4332	conv	down	slight dep
4398	conv	up	?

Teeth.—The number of individuals with malocclusion indicates unusual variation in the size of the mandible.

TEETH

Bite	No.	Per cent	Loss ¹	No.	Per cent
Under	2	1.89	None	14	36.84
Edge-to-edge	18	16.98	1-4	22	57.89
Slight over	37	34.91	5-8	1	2.63
Marked over	49	46.23	9-16	0	
			17-	0	
Total	106	100.01	All	1	2.63
			Total	38	99.99

Condition	No.	Per cent
Very bad	1	1.61
Bad	1	1.61
Fair	4	6.45
Good	38	61.29
Excellent	18	29.03
Total	62	99.99

The following table records observations, eruption, and in some cases the teeth lost by the individuals.

DENTITION

No.	Description
4290	Average
4291	Some stain
4294	Incomplete eruption
4295	Black at gum line
4296	Yellow and worn but strong; lost first upper right molar
4297	Crooked, as if the jaws were not large enough
4298	Some deposit
4300	Yellow stain from tobacco and coffee; crooked
4302	Worn, especially the lower incisors; some stain
4303	No third molars; slight stain but strong
4304	Upper third molars just erupted
4306	Yellow; molars and first lower central incisors
4307	Yellow
4308	Worn
4309	Yellow and in foul condition; many teeth including upper incisors lost
4310	Stained
4311	Stained; much worn
4312	Yellow; many teeth including upper incisors lost
4313	Very yellow and worn; third lower molars and one upper molar lost

¹ Individuals recorded as having lost many, several, or some teeth were not included in the table on loss. They were as follows: many, Nos. 4308-4310, 4312, 4315, 4359, and 4392; several, Nos. 4307, 4311, 4317, 4318, 4338, 4339, and 4364; and some, Nos. 4337 and 4397.

No.	Description
4314	Crooked; upper second and third molars lost
4315	Stained
4316	Some stain
4317	Two front teeth knocked out
4318	Strong; brown stain around gums
4319	Stained, deposit; several lost from caries
4320	Stained very dark brown
4321	Very crooked; stained from tobacco
4322	Worn
4323	Slight stain; lost third upper molars
4324	Some tobacco stain
4325	Third upper molars missing
4326	Crooked; slight stain
4327	Some stain
4329	All lower right molars gone; first right upper molar broken from being <i>mudawwad</i> ("having worms in it," carious)
4330	Slight stain
4331	Very yellow and stained
4332	Slightly yellow
4333	Complete eruption at twenty years of age
4334	Slightly yellow
4335	Stained; upper third molars not erupted
4337	Stained
4341	No eruption of third upper molars
4342	Some stain
4344	Small teeth
4346	Teeth crowding caused lower lateral incisors to grow behind
4347	Complete eruption at twenty years of age
4348	Slightly yellow
4349	Incomplete eruption
4350	Stained from tobacco
4351	Yellow deposit
4352	Slightly stained; upper second right incisor covered with gold
4353	Worn
4354	Slightly worn; stained from tobacco
4355	Much stained from tobacco
4356	Yellow deposit; large teeth
4357	Slightly yellow
4358	Very stained and yellow
4360	Worn and slightly stained
4361	Worn and yellow
4362	Some stain
4364	Some stain; worn
4365	Some wear
4368	Stained; upper third molars incompletely erupted
4369	Stained
4370	Slightly stained
4374	Incomplete eruption
4375	Worn; slight stain
4376	Worn; yellow
4378	Stained
4380	Worn
4381	Incomplete eruption
4382	Yellow deposit
4383	Worn
4384	Slightly crooked; some yellow deposit
4385	Crooked; white
4387	Upper incisors widely spaced
4388	Complete eruption at twenty years of age
4389	Yellow deposit
4390	Worn; yellow

No.	Description
4391	Stained
4392	Black stain
4393	Stained
4395	Yellow
4396	Yellow
4397	White
4398	Much deposit; worn; three gold-capped

Health.—Health was recorded for only one individual; No. 4290, good.

Disease.—Fourteen individuals (Nos. 4292, 4294, 4295, 4303, 4314, 4323, 4343, 4345, 4347, 4352, 4371, 4381, 4388, and 4389) had smallpox scars. No. 4293 had ringworm. No. 4415 had a scar from a "Baghdad boil" on his right cheek while No. 4353 had a bad boil(?) above the right side of his lip. No. 4374 had scalp disease, probably favus, and No. 4398 had scurf on his scalp.

No. 4354 had a mark on the back of the right hand from opening a blood vessel. In the An Nasiriya *Liwa* a treatment for stomach pains is to take blood from the hand and let it drop into hot water; certain individuals (whether male or female was not clear) can then diagnose whether the pain is caused by excess of meat or fat in the digestive tract.

No. 4357 had a white spot on the right wrist. The following reason was ascribed: when his mother was pregnant she did not eat curds (*rōba*) and kept scratching her wrist on this spot. As a direct result the boy was born with this mark on his wrist. The observer believed that the spot was due to a lack of pigmentation.

Cauterization.—These Arabs of the An Nasiriya *Liwa* believe that circular scars caused by branding or cauterization relieve pain and in some cases give strength to the part of the body thus treated; for example, head pains can be relieved and strength increased in the arm through this rather crude and excessively painful method.

These marks are called *chawi* or more correctly *kawi*. For the sake of simplicity and convenience, the letter *s* has been added to form the Anglicized plural.

The group was divided almost equally into those who bore *chawi* marks and those who did not. The latter consisted of the following fifty-six individuals: Nos. 4290–4295, 4297, 4299, 4300–4303, 4305, 4306, 4308–4311, 4314, 4316, 4318, 4319, 4321, 4323, 4325, 4326, 4334, 4335, 4337, 4338, 4340, 4342, 4344, 4347–4349, 4352, 4354, 4359, 4365–4367, 4370, 4372–4374, 4376, 4378, 4382–4384, 4386, 4387, and 4389–4391.

Tattooing.—Among the 109 men examined eighty-five (77.98 per cent) bore tattooed designs. The following individuals were not tattooed: Nos. 4294, 4295, 4301, 4309, 4311, 4315, 4316, 4328, 4334, 4336, 4337, 4339, 4354, 4355, 4365, 4369, 4370, 4379, 4385, 4392, 4394, 4396, and 4398.

STATISTICAL ANALYSES OF 109 AN NASIRIYA MALES

There now remains the task of grouping the total series of An Nasiriya males according to the Harvard and Keith classificatory systems for stature, sitting height (trunk length), minimum frontal diameter, head breadth, cephalic index, nasal height, nasal breadth, and nasal index.

Stature.—These inhabitants of the An Nasiriya *Liwa* were medium to tall according to both systems. There is remarkably little difference in the groupings. The average stature was 167.17, which is slightly higher than the average for Southwestern Asia. Slightly more than half of the group fell into the medium group according to both the Harvard and the Keith classificatory systems. About one-third were tall (169.5–179.9) although no man was in the very tall (180.0–x) class.

STATURE

Harvard System	No.	Per cent	Keith System	No.	Per cent
Short (x–160.5).....	10	9.17	Short (x–159.9).....	7	6.42
Medium (160.6–169.4)...	60	55.05	Medium (160.0–169.9)...	66	60.55
Tall (169.5–x).....	39	35.78	Tall (170.0–179.9).....	36	33.03
			Very tall (180.0–x).....	0	.....
Total.....	109	100.00	Total.....	109	100.00

Sitting Height (Trunk Length).—The relative sitting height index of 50.86 together with the stature groupings reveal that the tendency to shortness in trunk length is more than compensated by the increase in leg length. On the basis of the trunk length groups, the stature should be short to medium and not medium to tall as is the case.

SITTING HEIGHT (Trunk Length)

Group	No.	Per cent
Very short (x–74.9).....	0	.....
Short (75.0–79.9).....	2	1.83
Medium (80.0–84.9).....	53	48.62
Long (85.0–89.9).....	51	46.79
Very long (90.0–x).....	3	2.75
Total.....	109	99.99

Minimum Frontal Diameter.—The mean was 104.49, a low figure for this general area.

MINIMUM FRONTAL DIAMETER		
Group	No.	Per cent
Very narrow (x-99).....	9	8.26
Narrow (100-109).....	88	80.73
Wide (110-119).....	12	11.01
Very wide (120-x).....	0	.....
Total.....	109	100.00

Head Breadth.—The mean for this measurement was 148.39, which indicates a tendency toward broadness. The mean head length was 189.88, which is short for this part of the world.

HEAD BREADTH		
Group	No.	Per cent
Very narrow (120-129).....	0	.....
Narrow (130-139).....	2	1.83
Wide (140-149).....	63	57.80
Very wide (150-x).....	44	40.37
Total.....	109	100.00

Cephalic Index.—The Harvard and the Keith systems show somewhat different arrangements.

The mean cephalic index was 78.19. Therefore the peoples of the An Nasiriya *Liwa* were mesocephals with both brachycephalic and dolichocephalic elements, indicating a mixed population.

CEPHALIC INDEX					
Harvard System	No.	Per cent	Keith System	No.	Per cent
Dolichocephalic.....	37	33.94	Ultradolichocephalic... (x-70.0)	0	.....
Mesocephalic.....	63	57.80	Dolichocephalic..... (70.1-75.0)	16	14.68
Brachycephalic.....	9	8.26	Mesocephalic..... (75.1-79.9)	64	58.72
Total.....	109	100.00	Brachycephalic..... (80.0-84.9)	27	24.77
			Ultrabrachycephalic... (85.0-x)	2	1.83
			Total.....	109	100.00

Facial Measurements and Indices.—The mean upper facial height was 71.40. The mean total facial length was 118.30. Thus the lower part of the face tended to be short. This disharmony resulted in a wide diffusion of the total facial indices.

FACIAL MEASUREMENTS AND INDICES					
Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short..... (x-63)	3	2.75	Short..... (x-109)	6	5.50
Medium short..... (64-69)	31	28.44	Medium short..... (110-119)	57	52.29
Medium long..... (70-75)	57	52.29	Medium long..... (120-129)	43	39.45
Long..... (76-x)	18	16.51	Long..... (130-x)	3	2.75
Total.....	109	99.99	Total.....	109	99.99

BIZYGOMATIC BREADTH

Total facial length	x-124		125-134		135-x		Totals	
	No.	%	No.	%	No.	%	No.	%
x-109.....	0	.....	1	2.00	1	2.00	2	4.00
110-124.....	1	2.00	11	22.00	18	36.00	30	60.00
125-x.....	0	.....	6	12.00	12	24.00	18	36.00
							50	100.00

UPPER FACIAL LENGTH

Total facial length	x-63		64-69		70-75		76-81		82-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
x-109.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....
110-119.....	3	6.00	12	24.00	1	2.00	0	.....	0	.....	16	32.00
120-129.....	4	8.00	10	20.00	10	20.00	2	4.00	1	2.00	27	54.00
130-x.....	0	.....	1	2.00	3	6.00	2	4.00	1	2.00	7	14.00
											50	100.00

NASAL WIDTH

Nasal length	x-29		30-35		36-41		42-x		Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%
x-49.....	0	.....	14	28.57	4	8.16	0	.....	18	36.73
50-59.....	3	6.12	14	28.57	11	22.45	0	.....	28	57.14
60-x.....	0	.....	1	2.04	2	4.08	0	.....	3	6.12
									49	99.99

VITAL STATISTICS* OF AN NASIRIYA MALES

No.	Age	Married†	Sons	Daughters
4290	30	0	.....	.....
4291	25	1	2, 0	0, 0
4292	19	0	.....	.....
4293	25	1	2, 0	0, 0
4294	15	0	.....	.....
4295	20	0	.....	.....
4296	30	.....	.....	.....
4297	23	0	.....	.....
4298	25	0	.....	.....
4299	35	0	.....	.....
4300	30	1	2, 0	1, 0
4301	38	0	.....	.....
4302	25	1	1, 0	0, 0
4303	25	0	.....	.....
4304	16	0	.....	.....
4305	70	1	0, 4	.....
4306	53	4	4, 4	6, 0
4307	55	1	1, 2	2, 0
4308	65	1	0, 4	1, 2
4309	38	1	0, 0	0, 0
4310	53	1	2, 6	0, 4
4311	50	1	3, 0	1, 2
4312	45	1	1, 1	0, 11

* Italicized numbers refer to deceased children.

† Since so many individuals claimed to be unmarried, an unusual condition among the tribal Arabs, Lady Drower questioned the veracity of their assertions.

VITAL STATISTICS* OF AN NASIRIYA MALES

No.	Age	Married	Sons	Daughters
4313	48	1	5, 2	1, 2
4314	48	1	4, 0	2, 1
4315	75	1	1, 0	2, 0
4316	21	0	....	....
4317	25	0	....	....
4318	38	1	0, 0	0, 0
4319	35	1	0, 0	....
4320	40	1	1, 3	2, 2
4321	25	1	1, 0	1, 0
4322	28	0	....	....
4323	21	1 (2 mos.)	....	....
4324	20	0	....	....
4325	19	0	....	....
4326	25	0	....	....
4327	32	1	1	....
4328	25	0	....	....
4329	32	1	2, 0	2, 0
4330	33	1	0, 0	2, 0
4331	35	1	2, 1	1, 0
4332	32	0	....	....
4333	20	1	0, 0	0, 0
4334	43	1	1, 0	3, 0
4335	19	0	....	....
4336	27	0	....	....
4337	40	0	....	....
4338	28	1	0, 0	3, 0
4339	27	1	1, 0	0, 0
4340	25	.	....	....
4341	21	0	....	....
4342	25	0	....	....
4343	25	0	....	....
4344	23	0	....	....
4345	30	0	....	....
4346	30	1	0, 0	0, 0
4347	20	1	2, 0	0, 0
4348	22	1	1, 0	0, 0
4349	18	0	....	....
4350	22	0	....	....
4351	22	0	....	....
4352	30	0	....	....
4353	38	3	1, 0	0, 0
4354	28	1	0, 0	0, 0
4355	38	0	....	....
4356	30	0	....	....
4357	25	0	....	....
4358	38	1	....	3
4359	35	1	0, 0	0, 0
4360	40	1	2, 0	2, 0
4361	40	1	0, 0	1, 0
4362	23	0	....	....
4363	25	0	....	....
4364	40	0	....	....

* Italicized numbers refer to deceased children.

VITAL STATISTICS* OF AN NASIRIYA MALES

No.	Age	Married	Sons	Daughters
4365	35	0	....	....
4366	21	0	....	....
4367	20	0	....	....
4368	35	1	1, 0	1, 0
4369	20	0	....	....
4370	37	1	2, 0	2, 0
4371	25	1	0, 0	0, 0
4372	30	1	1, 0	1, 0
4373	22	1	1, 0	1, 0
4374	18	0	....	....
4375	35	1	0, 0	0, 3
4376	40	0	....	....
4377	32	1	....	....
4378	40	1	2, 0	0, 0
4379	35	0	....	....
4380	38	2	2, 0	2, 0
4381	18	1	....	....
4382	30	1	0, 0	0, 0
4383	38	1	1, 0	1, 1
4384	25	1	0, 0	2, 0
4385	22	0	....	....
4386	33	1	2	....
4387	40	1	3, 0	3, 0
4388	20	0	....	....
4389	28	0	....	....
4390	40	1	1, 0	1, 0
4391	30	1	1, 0	1, 0
4392	45	1	2, 0	1, 0
4393	38	1	1, 0	1, 0
4394	45	1	2, 0	1, 0
4395	32	1	2, 0	1, 0
4396	28	0	....	....
4397	30	0	....	....
4398	29	1	0, 0	0, 1†
4399	50	1	2, 3	2, 1
4400	25	0	....	....
4401	25	0	....	....
4402	25	0	....	....
4403	53	1	3, 0	2, 0
4404	60	1	2, 0	3, 0
4405	70	1	1, 2	....
4406	45	1	1, 0	1, 0
4407	48	1	....	3
4408	35	2	....	2
4409	22	0	....	....
4410	35	0	....	....
4411	38	1	2	....
4412	18	0	....	....
4413	15	0	....	....
4414	27	0	....	....
4415	25	1	3, 0	1, 0

* Italicized numbers refer to deceased children.

† Miscarriage.

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
4290	30	1656	846	188	148	104	136	101	118	72	54	38
4291	25	1620	827	179	151	101	135	106	120	71	49	32
4292	19	1672	845	186	143	103	135	101	111	68	49	35
4293	25	1640	858	185	145	103	136	103	118	71	52	36
4294*	15	1651	861	194	153	105	133	106	110	69	49	38
4295	20	1702	866	178	137	101	126	95	101	65	47	35
4296	30	1653	824	194	151	103	137	100	113	66	48	36
4297	23	1667	872	183	145	105	133	100	124	73	53	38
4298	25	1645	874	188	143	104	133	103	129	78	54	34
4299	35	1694	891	197	148	106	138	102	123	73	51	38
4300	30	1641	846	189	154	(110)†	138	105	122	75	52	40
4301	38	1707	915	189	154	108	143	101	124	73	49	38
4302	25	1645	861	181	153	102	137	96	118	72	51	38
4303	25	1717	859	184	147	103	132	104	110	66	48	40
4304*	16	1620	826	188	142	100	128	93	115	68	48	37
4305	70	1605	836	191	141	103	134	105	(100)	(60)	54	40
4306	53	1565	839	188	148	99	137	110	112	68	47	39
4307	55	1710	870	191	145	104	134	95	123	76	51	37
4308	65	1660	798	195	154	109	142	108	117	75	48	41
4309	38	1560	809	180	148	101	133	103	(118)	(69)	53	34
4310	53	1674	867	193	154	106	140	100	115	69	48	35
4311	50	1651	803	187‡	158	99	133	93	128	78	54	37
4312	45	1649	861	188	146	101	135	102	(111)	(64)	45	35
4313	48	1762	890	185	157	107	131	101	125	82	56	35
4314	48	1721	865	192	145	102	132	108	112	69	50	36
4315*	75	1688	830	188	153	104	150	117	126	75	57	39
4316	21	1592	831	188	150	106	136	105	124	74	52	36
4317	25	1724	850	188	144	107	137	104	112	68	44	37
4318	38	1650	858	193	154	102	138	109	120	73	46	41
4319	35	1686	807	190	141	105	131	104	122	72	46	36
4320	40	1741	895	196	150	109	135	115	127	79	51	40
4321	25	1615	817	180	151	103	135	98	113	67	47	33
4322	28	1609	806	180	141	97	130	93	120	76	55	36
4323	21	1637	862	191	146	107	135	96	120	73	53	35
4324	20	1692	899	175	141	95	121	93	119	67	47	31
4325	19	1712	838	180	148	105	133	108	114	68	46	38
4326	25	1703	863	184	157	110	139	107	117	67	45	35
4327	32	1696	860	192	150	105	133	101	118	74	53	40
4328	25	1656	856	185	143	102	130	110	114	65	44	38
4329	32	1726	892	186	143	102	131	101	121	76	56	32
4330	33	1741	835	201	159	114	146	111	117	69	48	41
4331	35	1639	833	188	135	98	123	94	118	75	50	38
4332	32	1691	868	199	147	107	138	101	119	70	48	44
4333	20	1645	843	190	145	102	138	101	105	59	44	36
4334	43	1753	870	189	157	105	139	104	127	77	56	36
4335	19	1710	854	187	142	101	130	95	121	75	55	31
4336	27	1630	817	187	146	100	135	94	122	76	54	35
4337	40	1700	871	191	154	107	135	102	123	77	52	32
4338	28	1668	830	197	147	108	139	107	126	74	52	36
4339	27	1715	835	192	155	114	143	111	122	70	48	38
4340	25	1750	877	185	150	106	137	106	116	72	53	32
4341	21	1657	838	179	146	102	133	98	110	66	48	34
4342	25	1636	834	196	148	110	134	95	108	65	47	42
4343	25	1762	898	194	152	114	137	103	119	73	53	39
4344	23	1644	821	182	149	100	127	99	114	70	50	35
4345	30	1684	862	193	146	106	136	107	118	72	53	39
4346	30	1771	860	199	154	115	139	105	130	75	52	35

* Omitted from means.

† Measurement affected because of dagger wound.

‡ Occiput flat.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
4290	59	34	51.1	78.7	70.3	86.8	52.9	70.4	57.6	74.3	76.5
4291	59	33	51.0	84.4	66.9	88.9	52.6	65.3	55.9	78.5	74.8
4292	66	38	50.5	76.9	72.0	82.2	50.4	71.4	57.6	74.8	76.3
4293	59	35	52.3	78.4	71.0	86.8	52.2	69.2	59.3	75.7	75.7
4294	61	38	52.2	78.9	68.6	82.7	51.9	77.6	62.3	79.7	78.9
4295	62	36	50.9	77.0	73.7	80.2	51.6	74.5	58.1	75.4	80.2
4296	64	36	49.8	77.8	68.2	82.5	48.2	75.0	56.3	73.0	75.2
4297	67	38	52.3	79.2	72.4	93.2	54.9	71.7	56.7	75.2	78.9
4298	66	36	53.1	76.1	72.7	97.0	58.6	63.0	54.5	77.4	78.2
4299	65	40	52.6	75.1	71.6	89.1	52.9	74.5	61.5	73.9	76.8
4300	61	35	51.6	81.5	71.4	88.4	54.3	76.9	57.4	76.1	80.0
4301	62	30	53.6	81.5	70.1	86.7	51.0	77.6	48.4	70.6	75.5
4302	67	35	52.3	84.5	66.7	86.1	52.6	74.5	52.2	70.1	74.5
4303	58	32	50.0	79.9	70.1	83.3	50.0	83.3	55.2	78.8	78.0
4304	59	33	51.0	75.5	70.4	89.8	53.1	77.1	55.9	72.7	78.1
4305	68	36	52.1	73.8	73.0	74.6	44.8	74.1	52.9	78.4	76.9
4306	72	36	53.6	78.7	66.9	81.8	49.6	83.0	50.0	80.3	72.3
4307	65	36	50.9	75.9	71.7	91.8	56.7	72.5	55.4	70.9	77.6
4308	72	36	48.1	79.0	70.8	82.4	52.8	85.4	50.0	76.1	76.8
4309	67	39	51.9	82.2	68.2	88.7	51.9	64.2	58.2	77.4	75.9
4310	67	38	51.8	79.8	68.8	82.1	49.3	72.9	56.7	71.4	75.7
4311	67	33	48.6	84.5	62.7	96.2	58.6	68.5	49.3	69.9	74.4
4312	57	33	52.2	77.7	69.2	82.2	47.4	77.8	57.9	75.6	74.8
4313	66	38	50.5	84.9	68.2	95.4	62.6	62.5	57.6	77.1	81.7
4314	68	36	50.3	75.5	70.3	84.8	52.3	72.0	52.9	81.8	77.3
4315	69	33	49.2	81.4	68.0	84.0	50.0	68.4	47.8	78.0	69.3
4316	65	35	52.2	79.8	70.7	91.2	54.4	69.2	53.8	77.2	77.9
4317	63	34	49.3	76.6	74.3	81.8	49.6	84.1	54.0	75.9	78.1
4318	68	39	52.0	80.0	66.2	87.0	52.9	89.1	57.4	79.0	73.9
4319	71	34	47.9	74.2	74.5	93.1	55.0	78.3	47.9	79.4	80.2
4320	68	40	51.4	76.5	72.7	94.1	58.5	78.4	53.8	85.2	80.7
4321	57	35	50.6	83.9	68.2	83.7	49.6	70.2	61.4	72.6	76.3
4322	64	37	50.1	78.3	68.8	92.3	58.5	65.5	57.8	71.5	74.6
4323	62	38	52.7	76.4	73.3	88.9	54.1	66.0	61.3	71.1	79.3
4324	63	36	53.1	80.6	67.4	93.3	55.4	66.0	57.1	76.9	78.5
4325	64	37	48.9	82.2	70.9	85.7	51.1	82.6	57.8	81.2	78.9
4326	62	35	50.7	85.3	70.1	84.2	48.2	77.8	56.5	77.0	79.1
4327	63	36	50.7	78.1	70.0	88.7	55.6	75.5	57.1	75.9	78.9
4328	62	33	51.7	77.3	71.3	87.7	50.0	86.4	53.2	84.6	78.5
4329	65	41	51.7	76.9	71.3	92.4	58.0	57.1	63.1	77.1	77.9
4330	63	36	50.8	79.1	71.7	80.1	47.3	85.4	57.1	76.0	78.1
4331	63	35	50.8	71.8	72.6	95.9	61.0	76.0	55.6	76.4	80.0
4332	68	38	51.3	73.9	72.8	86.2	50.7	91.7	55.9	73.2	77.5
4333	60	36	51.2	76.3	70.3	76.1	42.8	81.8	60.0	73.2	73.9
4334	64	36	49.6	83.1	66.9	91.4	55.4	64.3	56.3	74.8	75.5
4335	59	34	49.9	75.9	71.1	93.1	57.7	56.4	57.6	73.1	77.7
4336	65	36	50.1	78.1	68.5	90.4	56.3	64.8	55.4	69.6	74.1
4337	62	33	51.2	80.6	69.5	91.1	57.0	61.5	53.2	75.6	79.3
4338	61	35	49.8	74.6	73.5	90.6	53.2	69.2	57.4	77.0	77.7
4339	63	35	48.7	80.7	73.5	85.3	49.0	79.2	55.6	77.6	79.7
4340	61	33	50.1	81.1	70.7	84.7	52.6	60.4	54.1	77.4	77.4
4341	64	33	50.6	81.6	70.0	82.7	49.6	70.8	51.6	73.7	76.7
4342	64	35	51.0	75.5	74.3	80.6	48.5	89.4	54.7	70.9	82.1
4343	65	36	51.0	78.4	75.0	86.9	53.3	73.6	55.4	75.2	83.2
4344	62	34	49.9	81.9	67.1	90.0	55.1	70.0	54.8	78.0	78.7
4345	59	36	51.2	75.6	72.6	86.8	52.9	73.6	61.0	78.7	77.9
4346	69	36	48.6	77.4	74.7	93.5	54.0	67.3	52.2	75.5	82.7

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
4347	20	1779	895	193	156	108	140	105	124	74	50	35
4348	22	1718	858	190	143	106	131	100	112	64	46	36
4349	18	1693	863	183	149	104	139	105	121	72	50	37
4350	22	1632	821	190	145	110	128	100	115	69	48	34
4351	22	1670	870	185	143	107	131	96	121	75	53	36
4352	30	1684	836	189	140	97	128	97	115	70	47	39
4353	38	1642	889	189	151	108	142	105	116	(75)	51	(46)
4354	28	1749	898	189	146	103	138	(109)	127	79	54	39
4355	38	1706	855	188	142	104	130	103	122	75	50	40
4356	30	1692	839	194	156	107	140	106	121	67	47	43
4357	25	1669	870	187	151	105	137	110	113	66	48	37
4358	38	1751	887	204	150	108	141	100	136	77	50	43
4359	35	1738	847	190	148	102	128	98	118	76	52	38
4360	40	1654	872	198	147	106	130	107	126	76	53	38
4361	40	1700	874	203	151	106	140	111	128	76	54	36
4362	28	1726	878	185	146	103	135	104	124	75	(54)	37
4363	25	1609	818	198	142	105	135	94	107	63	47	37
4364	40	1687	849	194	145	111	138	106	130	75	50	39
4365	35	1707	870	190	152	114	145	102	123	74	54	38
4366	21	1715	838	194	146	105	135	99	118	65	44	36
4367	20	1622	822	183	157	103	132	97	109	64	45	35
4368	35	1615	806	193	150	99	132	105	115	71	49	38
4369	20	1700	917	183	148	106	144	103	113	67	46	37
4370	37	1689	831	194	147	101	132	94	126	76	53	37
4371	25	1563	831	189	149	100	132	102	115	71	46	37
4372	30	1624	836	192	144	101	133	96	122	71	48	32
4373	22	1612	813	188	156	106	137	101	112	70	48	39
4374	18	1710	861	193	144	104	130	102	113	68	48	36
4375	35	1630	832	200	154	105	136	109	120	74	47	37
4376	40	1759	908	204	153	106	145	110	124	77	53	36
4377	32	1619	800	184	151	110	143	106	114	72	47	42
4378	35	1637	846	194	156	101	138	103	117	70	47	41
4379	35	1697	858	193	148	106	137	91	116	66	47	37
4380	38	1692	863	191	141	102	132	101	118	73	49	34
4381	18	1723	851	192	146	104	133	104	114	72	53	38
4382	30	1676	842	193	157	109	146	112	119	71	50	34
4383	38	1587	819	191	146	102	133	105	113	66	49	35
4384	25	1725	843	189	147	103	134	102	125	72	51	40
4385	22	1615	835	191	151	104	135	107	118	71	50	36
4386	33	1761	861	191	150	98	137	104	115	71	51	40
4387	40	1725	847	194	142	100	137	106	113	68	46	38
4388	20	1654	813	194	152	102	131	100	116	71	50	36
4389	28	1673	830	191	145	102	133	98	119	73	48	35
4390	40	1674	825	194	149	109	137	106	120	72	50	42
4391	30	1601	808	191	149	106	139	102	120	73	52	39
4392	45	1600	801	192	145	101	135	105	129	79	53	35
4393	38	1652	861	193	150	107	137	102	120	75	58	35
4394	45	1620	839	186	148	101	129	102	118	71	57	39
4395	32	1629	861	195	149	108	144	105	120	72	50	37
4396	28	1631	825	190	147	113	139	93	115	70	49	35
4397	30	1528	774	189	151	98	130	100	112	70	52	34
4398	29	1567	836	189	149	107	140	110	119	74	52	34
4399*	50	1681	845	191	144	103	135	106	126	76	54	31
4400*	25	1698	918	182	149	102	135	102	118	70	48	33
4401*	25	1706	908	189	149	102	142	110	118	71	53	41
4402*	25	1570	814	188	145	103	133	110	120	72	55	35
4403*	53	1665	875	188	142	100	138	102	(122)	(72)	49	32
4404*	60	1579	795	177	146	109	136	109	110	67	48	33
4405*	70	1585	792	179	136	94	127	97	(109)	(66)	50	31

* Omitted from means.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
4347	63	37	50.3	80.8	69.2	88.6	52.9	70.0	58.7	75.0	77.1
4348	67	37	49.9	75.3	74.1	85.5	48.9	78.3	55.2	76.3	80.9
4349	62	33	51.0	81.4	69.8	87.1	51.8	74.0	53.2	75.5	74.8
4350	56	35	50.3	76.3	75.9	89.8	53.9	70.8	62.5	78.1	85.9
4351	65	35	52.1	77.3	74.8	92.4	57.3	67.9	53.8	73.3	81.7
4352	64	33	49.6	74.1	69.3	89.8	54.7	83.0	51.6	75.8	75.8
4353	65	36	54.1	79.9	71.5	81.7	52.8	90.2	55.4	73.9	76.1
4354	66	34	51.3	77.2	70.5	92.0	57.2	72.2	51.5	79.0	74.6
4355	63	37	50.1	75.5	73.2	93.8	57.7	80.0	58.7	79.2	80.0
4356	63	34	49.6	80.4	68.6	86.4	47.9	91.5	54.0	75.7	76.4
4357	62	32	52.1	80.7	69.5	82.5	48.2	77.1	51.6	80.3	76.6
4358	71	35	50.7	73.5	72.0	96.5	54.6	86.0	49.3	70.9	76.6
4359	71	42	48.7	77.9	68.9	92.2	59.4	73.1	59.2	76.6	80.0
4360	65	40	52.7	74.2	72.1	96.9	58.5	71.7	61.5	82.3	81.5
4361	59	36	51.4	74.4	70.2	91.4	54.3	66.7	61.0	79.3	75.7
4362	63	33	50.9	78.9	70.5	91.9	55.6	68.5	52.4	77.0	76.3
4363	57	34	50.8	71.7	73.9	79.3	46.7	78.7	59.6	69.6	77.8
4364	68	39	50.3	74.7	76.6	94.2	54.3	78.0	57.4	76.8	80.4
4365	65	38	48.7	80.0	75.0	84.8	51.0	70.4	58.5	70.3	78.6
4366	62	35	48.9	75.3	71.9	87.4	48.1	81.8	56.5	73.3	77.8
4367	53	36	50.7	85.8	65.6	82.6	48.5	77.8	67.9	73.5	78.0
4368	61	36	49.9	77.7	66.0	87.1	53.8	77.6	59.0	79.5	75.0
4369	65	35	53.9	80.9	71.6	78.5	46.5	80.4	53.8	71.5	73.6
4370	68	33	49.2	75.8	68.7	95.5	51.7	69.8	48.5	71.2	76.5
4371	56	35	53.2	78.8	67.1	87.1	53.8	80.4	62.5	77.3	75.8
4372	57	28	51.5	75.0	70.1	91.7	53.4	66.7	49.1	72.2	75.9
4373	60	36	50.4	83.0	67.9	81.8	51.1	81.3	60.0	73.7	77.4
4374	66	36	50.4	74.6	72.2	86.9	52.3	75.0	54.5	78.5	80.0
4375	59	34	51.0	77.0	68.2	88.2	54.4	78.7	57.6	80.1	77.2
4376	66	41	51.6	75.0	69.3	85.5	53.1	67.9	62.1	75.9	73.1
4377	60	34	49.4	82.1	72.8	79.7	50.3	89.4	56.7	74.1	76.9
4378	65	34	51.7	80.4	64.7	84.8	50.7	87.2	52.3	74.6	73.2
4379	61	36	50.6	76.7	71.6	84.7	48.2	78.7	59.0	66.4	77.4
4380	65	39	51.0	73.8	72.3	89.4	55.3	69.4	60.0	76.5	77.3
4381	65	33	49.4	76.0	71.2	85.7	54.1	71.7	50.8	78.2	78.2
4382	66	33	50.2	81.3	69.4	81.5	48.6	68.0	50.0	76.7	74.7
4383	65	34	51.6	76.4	69.9	85.0	49.6	71.4	52.3	78.9	76.7
4384	61	38	48.9	77.8	70.1	93.3	53.7	78.4	62.3	76.1	76.9
4385	63	33	51.7	79.1	68.9	87.4	52.6	72.0	52.4	79.3	77.0
4386	70	35	48.9	78.5	65.3	83.9	51.8	78.4	50.0	75.9	71.5
4387	65	35	49.1	73.2	70.4	82.5	49.6	82.6	53.8	77.4	73.0
4388	64	37	49.2	78.4	67.1	88.5	54.2	72.0	57.8	76.3	77.9
4389	64	31	49.6	75.9	70.3	89.5	54.9	72.9	48.4	73.7	76.7
4390	68	38	49.3	76.8	73.2	87.6	52.6	84.0	55.9	77.4	79.6
4391	61	34	50.5	78.0	71.1	86.3	52.5	75.0	55.7	73.4	76.3
4392	66	35	50.1	75.5	69.7	95.6	58.5	66.0	53.0	77.8	74.8
4393	60	36	52.1	77.7	71.3	87.6	54.7	60.3	60.0	74.5	78.1
4394	56	32	51.8	79.6	68.2	91.5	55.0	68.4	57.1	79.1	78.3
4395	67	35	52.9	76.4	72.5	83.3	50.0	74.0	52.2	72.9	75.0
4396	59	34	50.6	77.4	76.9	82.7	50.4	71.4	57.6	66.9	81.3
4397	56	34	50.7	79.9	64.9	86.2	53.8	65.4	60.7	76.9	75.4
4398	66	33	53.4	78.8	71.8	85.0	52.9	65.4	50.0	78.6	76.4
4399	61	38	50.3	75.4	71.5	93.3	56.3	57.4	62.3	78.5	76.3
4400	61	35	54.1	81.9	68.5	87.4	51.9	68.8	57.4	75.6	75.6
4401	65	35	53.2	78.8	68.5	83.1	50.0	77.4	53.8	77.5	71.8
4402	59	35	51.8	78.4	71.0	90.2	54.1	63.6	59.3	82.7	77.4
4403	58	34	52.6	75.5	70.4	88.4	52.2	65.3	58.6	73.9	72.5
4404	65	32	50.3	82.5	74.7	80.9	49.3	68.8	49.2	80.1	80.1
4405	66	36	50.0	76.0	69.1	85.8	52.0	62.0	54.5	76.4	74.0

MEASUREMENTS

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
4406*	45	1690	845	186	137	101	133	110	122	76	53	31
4407*	48	1695	831	197	150	110	138	109	131	81	59	37
4408*	35	1615	803	185	155	111	140	108	124	75	55	36
4409*	22	1633	824	183	143	110	139	104	107	63	43	34
4410*	35	1727	851	190	152	101	137	...	120	74	53	42
4411*	38	1630	817	193	146	107	138	103	125	76	54	44
4412*	18	1571	831	193	145	102	132	98	112	64	43	37
4413*	15	1615	822	192	147	104	133	98	120	65	47	36
4414*	27	1701	850	193	150	98	132	97	130	82	58	39
4415*	25	1663	817	199	155	105	138	101	122	76	55	34

* Omitted from means.

INDICES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
4406 (59)	32	50.0	73.7	73.7	91.7	57.1	58.5	(54.2)	82.7	75.9	
4407	68	39	49.0	76.1	73.3	94.9	58.7	62.7	57.4	79.0	79.7
4408	69	34	49.7	83.8	71.6	88.6	53.6	65.5	49.3	77.1	79.3
4409	59	35	50.5	78.1	76.9	77.0	45.3	79.1	59.3	74.8	79.1
4410	69	36	49.3	80.0	66.4	87.6	54.0	79.2	52.2	...	73.7
4411	66	38	50.1	75.6	73.3	90.6	55.1	81.5	57.6	74.6	77.5
4412	51	35	52.9	75.1	70.3	84.8	48.5	86.0	68.6	74.2	77.3
4413	57	33	50.9	76.6	70.7	90.2	48.9	76.6	57.9	73.7	78.2
4414	64	35	50.0	77.7	65.3	98.5	62.1	67.2	54.7	73.5	74.2
4415	66	36	49.1	77.9	67.7	88.4	55.1	61.8	54.5	73.2	76.1

MORPHOLOGICAL CHARACTERS OF AN NASIRIYA MALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
4290	l w	medium	black	dk br	blood	...	conv	medium
4291	(l w)	coarse	black	dk br	blood	...	str	cp-m
4292	(str)	medium	dk br	dk br	blood	...	conv	medium
4293*	....	coarse	dk br	dk br	clear	...	conv	medium
4294*	....	medium	dk br	dk br	clear	...	str	flar
4295*	....	.....	dk br	dk br	clear	...	str	flar
4296*	....	coarse	(black)	v dk br	clear	...	str	medium
4297*	....	.....	.....	dk br	clear	...	c-c	m-fl
4298	l w	coarse	black	dk br	blood	ray	c-c	cp-m
4299	l w	coarse	black	dk br	blood	...	conv	flar
4300	l w	(medium)	dk br	dk br	blood	...	conv	medium
4301	l w	coarse	blk, gray	dk br	blood	...	conc	flar
4302	l w	.....	dk br	dk br	blood	...	str	flar
4303*	....	.....	.....	dk br	blood	...	conc	flar
4304*	....	.....	(dk br)	dk br	clear	...	conc	flar
4305	....	coarse	gray	dk br	blood	...	conv	medium
4306†	....	.....	.....	dk br	blood	...	conc	flar
4307†	l w	coarse	dk br, gray	dk br	.....	...	conv	m-fl
4308	l w	coarse	gray	gr-br	.....	...	conv	flar
4309*	....	.....	(gray)	lt br	yellow	...	conv	medium
4310	l w	coarse	blk, gray	dk br	yellow, blood	...	str	medium
4311*	....	.....	blk, gray	dk br	yellow, blood	...	str	m-fl
4312†	l w	coarse	black	gray-br	clear	...	c-c	medium
4313*	....	(coarse)	black	v dk br	blood	...	conv	comp
4314*	....	.....	(dk br), gray	v dk br	yellow, blood	...	c-c	.....
4315†	....	.....	gray	.....	blood	...	conv	medium

* Shaven.

† Bald, back of head shaven.

† Bald.

‡ Slightly bald and short.

MORPHOLOGICAL CHARACTERS OF AN NASIRIYA MALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
4316	l w	.....	dk br	dk br	blood	...	conv	medium
4317*	medium	dk br	v dk br	yellow	...	conc	flar
4318†	coarse	black	dk br	blood	...	conv	flar
4319	coarse	dk br	dk br	blood	...	str	m-fl
4320*	dk br,	dk br	clear	...	conv	flar
			gray					
4321	coarse	black	dk br	yellow,	...	conv	medium
					blood			
4322	(dk br)	dk br	yellow	...	conv	medium
4323*	(dk br)	dk br	clear	...	conv	medium
4324*	(dk br)	gray-br	blood	...	conv	comp
4325*	(dk br)	v dk br	clear	...	conc	flar
4326*	(medium)	dk br	vk dk br	clear	...	conc	flar
4327	(dk br)	dk br	speck-	...	conv	flar
					blood			
4328	(dk br)	dk br	blood	...	str	flar
4329*	(black)	dk br	clear	...	conv	comp
4330	(dk br)	dk br	blood	...	str	flar
4331	(dk br)	dk br	.....	...	conc	m-fl
4332	(dk br)	dk br	yellow	...	conc	flar
4333	dk br	clear	...	c-c	flar
4334	gr-br	blood	zon	conv	medium
4335	l w	medium	dk br	dk br	clear	...	conv	comp
4336	dk br	blood	...	conv	medium
4337	dk br	blood	...	conv	comp
4338	blk, gray	dk br	blood	...	c-c	comp
4339	v dk br	clear	...	conc	m-fl
4340	dk br	blood	...	conv	comp
4341	dk br	speck-	...	conv	cp-m
					blood			
4342	dk br	clear	...	c-c	flar
4343	v dk br	clear	...	c-c	medium
4344	dk br	blood	...	conc	medium
4345	black	v dk br	blood	...	conc	m-fl
4346	black	lt br	blood	zon	str	medium
4347§	coarse	black	dk br	clear	...	conv	medium
4348	dk br	clear	...	conc	medium
4349	dk br	clear	...	conv	medium
4350§	coarse	black	dk br	blood	...	conv	medium
4351	(gray-br)	blood	...	conc	comp
4352	gray-br	blood	...	c-c	flar
4353	dk br	blood	...	conc	flar
4354	black	blood	...	str	medium
4355	dk br	blood	...	conv	flar
4356†	lt br	blood	...	conc	flar
4357	dk br	yellow	...	conc	flar
4358	v dk br	blood	...	str	m-fl
4359	dk br	yellow	...	conc	medium
4360	v dk br	blood	...	str	medium
4361	gray-br	blood	...	conv	comp
4362	v dk br	clear	...	conc	cp-m
4363	dk br	blood	...	str	medium
4364	dk br	blood	...	str	medium
4365†	dk br	blood	...	conv	medium

* Shaven.

† Rather bald.

§ Hair very short.

† Hair probably frizzly but shaven.

‡ Hair very thin probably because of disease.

MORPHOLOGICAL CHARACTERS OF AN NASIRIYA MALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
4366	dk br	blood	...	conc	flar
4367	dk br	blood	...	conv	m-fl
4368	gr-br	blood	zon	conv	medium
4369	dk br	blood	...	str	m-fl
4370†	(l w)	coarse	blk, gray	v dk br	blood	...	conc	medium
4371	dk br	clear	...	str	flar
4372	dk br	blood	...	c-c	cp-m
4373	dk br	clear	...	conv	m-fl
4374	v dk br	blood	...	conv	medium
4375‡	(medium)	dk br	v dk br	blood	...	str	m-fl
4376†	coarse	dk br	v dk br	blood	...	conv	comp
4377	v dk br	blood	...	conc	flar
4378	l w	coarse	blk, gray	dk br	blood	...	str	flar
4379	v dk br	blood	...	c-c	medium
4380	v dk br	....	...	conv	comp
4381	dk br	blood	...	conv	medium
4382	dk br	clear	...	conv	medium
4383	dk br	blood	...	conc	cp-m
4384	dk br	....	...	str	flar
4385	v dk br	blood	...	conc	medium
4386¶	dk br	blood	...	conv	medium
4387	dk br	blood	...	c-c	m-fl
4388	v dk br	....	...	conv	medium
4389	dk br	blood	...	c-c	medium
4390*	dk br	v dk br	blood	...	c-c	flar
4391	dk br	dk br	clear	...	conv	medium
4392	v dk br	blood	...	conv	medium
4393	blk, gray	dk br	blood	...	conv	medium
4394	black	dk br	blood	...	conv	medium
4395	v dk br	blood	...	conc	medium
4396	gr-br	blood	...	conv	medium
4397	v dk br	clear	...	str	comp
4398	l w	medium	dk br	dk br (blk)	clear	...	conv	medium
4399*	gray	dk br, gray	blood	...	conv	comp
4400*	(dk br)	dk br	blood	...	str	cp-m
4401	coarse	dk br	dk br	blood	...	conv	m-fl
4402	black	dk br	yellow	...	conv	medium
4403	l w	medium	black	dk br	blood	...	conv	medium
4404	medium	dk br	dk br	blood	...	conv	comp
4405	gray	dk br	....	...	c-c	comp
4406	dk br	dk br	blood	...	conv	comp
4407	(str)	fine	blk, gray	dk br	blood	...	conv	cp-m
4408	dk br	blood	...	conv	comp
4409	dk br	blood	...	conv-str	flar
4410	l w	coarse	black	dk br	blood	...	c-c	flar
4411	dk br	blood	...	str	flar
4412	v dk br	yellow	...	conc	flar
4413	dk br	yellow	...	conc	medium
4414	l w	coarse	dk br	dk br	blood	...	conv	medium
4415	lt br	clear	...	conv	comp

* Shaven.

† Hair short.

‡ Hair very short.

¶ Quite bald.

MEASUREMENTS AND INDICES OF AN NASIRIYA MALES

Measurements	Individuals	Mean	S.D.	C.V.
Stature.....	109	167.17±.34	5.30±.24	3.17±.14
Sitting height.....	109	84.98±.18	2.80±.13	3.29±.15
Head length.....	109	189.88±.36	5.53±.25	2.91±.13
Head breadth.....	109	148.39±.31	4.86±.22	3.28±.15
Minimum frontal diameter.....	109	104.49±.26	4.05±.19	3.88±.18
Bizygomatic breadth.....	109	135.39±.32	4.89±.22	3.61±.16
Bigonial breadth.....	109	102.52±.34	5.22±.24	5.09±.23
Total facial height.....	109	118.30±.40	6.12±.28	5.17±.24
Upper facial height.....	109	71.40±.28	4.27±.20	5.98±.28
Nasal height.....	109	50.10±.21	3.23±.15	6.45±.30
Nasal breadth.....	109	37.03±.18	2.77±.13	7.48±.35
Ear length.....	109	63.51±.25	3.83±.17	6.03±.27
Ear breadth.....	109	35.39±.15	2.31±.11	6.53±.31
Indices				
Relative sitting height.....	109	50.86±.09	1.35±.06	1.65±.12
Cephalic.....	109	78.19±.20	3.04±.14	3.89±.18
Fronto-parietal.....	109	70.51±.17	2.69±.12	3.82±.17
Zygo-frontal.....	109	77.31±.17	2.57±.12	3.32±.16
Zygo-gonial.....	109	75.73±.22	3.34±.15	4.41±.20
Total facial.....	109	87.46±.30	4.72±.22	5.40±.25
Upper facial.....	109	52.78±.23	3.50±.16	6.63±.30
Nasal.....	109	74.19±.47	7.32±.33	9.87±.44
Ear.....	109	55.84±.26	3.97±.18	7.11±.32

INDIVIDUALS OMITTED FROM THE STATISTICAL SERIES

Seventeen individuals were omitted because of origins too heterogeneous to form a comparable group. These included No. 4399 from Kut; Nos. 4400 and 4401 from An Najaf, the Al Baadwa and Al bu Shairuza respectively; No. 4402, a Husainat from Ham-mam Ali near Mosul; Nos. 4403-4406, Persians (now Iranis) from Isfahan, near Bender abu Shahr, Persia and Kermanshah respectively; No. 4407, a Persian gypsy; No. 4408, from Harta near Basra; No. 4409, a Sawaad from Halfaya; No. 4410, a Jubur from Baghdad *Liwa*; Nos. 4411 and 4412, Budur (shepherds) from An Nasiriya; No. 4413, a Sadun (Beduin) from Basra; No. 4414, a Juhaish from Hillah; and No. 4415, an Al Ubaid from Samarra.

Skin.—Nos. 4401 and 4414 had fair skins and No. 4409 a darker skin than the average.

Head Form.—No. 4406 had a high sloping vault with abstanding ears.

Hair.—Five individuals had dark brown hair. Nos. 4402, 4403, and 4410 had black hair. No. 4407 had black-gray and Nos. 4399 and 4405 gray hair. There were two individuals in the medium and three in the coarse categories of hair texture. No. 4407 had fine hair. Three individuals had low wavy hair, while one individual, No. 4407, had straight hair. Nos. 4399 and 4400 were shaven. No. 4410 had a mustache.

Eyes.—The majority had dark brown eyes. No. 4412 had very dark brown eyes, while No. 4399 had gray-brown and No. 4415 had light brown eyes. With the exception of three yellow and one clear sclera, the remainder were bloodshot. Nos. 4403 and 4407 had darker rims around dark brown eyes. Nos. 4399 and 4415 had darker rims around gray-brown and light brown eyes respectively.

No. 4405 had both eyes filmed, and No. 4411 had his left eye slightly filmed. No. 4404 had deep set eyes and No. 4411 small eyes. The eyes of No. 4405 were very red and rheumy; his vision was poor.

Nose.—There were two individuals in each of the straight, concave, and concavo-convex categories. The remainder had convex profiles. Six individuals had compressed-medium nasal wings. Four individuals had medium, one medium-flaring, and four flaring alae.

While No. 4399 had a straight septum with an upward inclination, No. 4400 had a straight septum with a slightly downward inclination. Nos. 4399 and 4400 had depressed nasal tips. The nose of No. 4409 was short, of No. 4414 large, and that of No. 4399 had a high, narrow bridge.

Teeth.—The majority (Nos. 4402, 4404, 4406, 4407, and 4411–4414) had marked-over occlusion. Nos. 4399 and 4410 had edge-to-edge and Nos. 4400, 4401, 4408, 4409, and 4415 had slight-over occlusion. Loss of teeth was indicated as none, Nos. 4401 and 4410; one to four, Nos. 4400 and 4402; some, No. 4406; many, Nos. 4399, 4403 (including the upper incisors), and 4407; and most, No. 4405. Eruption was incomplete in Nos. 4412 and 4413. The dental condition was recorded as fair, Nos. 4402 and 4408; good, Nos. 4412, 4414, and 4415; and very good, No. 4409.

DENTITION

No.	Description
4399	Much worn, yellow
4400	Very crooked, stained
4401	Caries
4404	Worn, yellow
4406	Bad deposit
4407	Stained
4408	Stained
4409	White
4410	Stained, slightly worn
4411	Slightly yellow
4412	Slightly stained
4414	Slightly yellow
4415	Slightly stained

Prognathism.—No. 4412, with possible Negroid admixture, had slight alveolar prognathism.

Henna.—No. 4407 had used henna on his hair.

Tattooing.—Among the seventeen individuals, eleven were tattooed.

Branding.—Six individuals (Nos. 4399, 4402, 4409, 4410, 4412, and 4414) were branded.

MISCELLANEOUS NOTES

No.	Description
4400	Thin, prison pallor
4404	Magician
4405	Four fingers of left hand lost through fighting
4407	Described as <i>kaulia</i> (gypsy) but claims he is not
4409	Different appearance from others, darker skin and a very short face
4414	Different type, fairer; in chains!
4415	Driver, but tribe keeps sheep and cultivates

WOMEN STUDIED IN AN NASIRIYA HOSPITAL

During March, 1935, forty women were also examined.

26 ARABS FROM VARIOUS LOCALITIES

No.	Tribe	Locality
4416-4417 } 4419-4424 }	.....	An Nasiriya
4425	<i>Hajji</i> Rathith	Near An Nasiriya
4426	Tuwalli	
4427	Uzairij	Near An Nasiriya
4428	Hassan	Hai
4429	Khafaya (Khafaja)	An Nasiriya
4430	Muhammad al-Shallal	Near An Nasiriya
4431	Zaiyad	Suq ash Shuyukh
4432	Bani Said	
4433	Khafaya (Khafaja)	An Nasiriya
4434	Hasad	Shatra
4435	Buaizi	Near An Nasiriya
4436	Hachcham	
4438	Tuwalli	Shamiya
4439	Bani Zaid	
4440	.....	Basra
4442	.....	Amara
4443	Al bu Muhammad	Amara
4444	Sheikh Farun	Near Ad Diwaniya

Vital Statistics.—The figures available indicate relatively large families, particularly when the mean age was about thirty. No. 4421 was recorded as having two sons living, many dead, and one daughter living, many dead.

VITAL STATISTICS

Sons	No.	Per cent	Daughters	No.	Per cent
None	5	23.81	None	5	23.81
1	10	47.62	1	6	28.57
2	2	9.52	2	4	19.05
3-4	4	19.05	3-4	6	28.57
5-6	0		5-6	0	
7 or more	0		7 or more	0	
Total	21	100.00	Total	21	100.00

Age.—The mean was 29.90, range 16-54. Half of the individuals were below thirty.

AGE DISTRIBUTION

Age	No.	Per cent	Age	No.	Per cent
17-19	6	23.08	50-54	1	3.85
20-24	3	11.54	55-59	0	
25-29	4	15.38	60-64	0	
30-34	3	11.54	65-69	0	
35-39	6	23.08	70-x	0	
40-44	2	7.69	Total	26	100.01
45-49	1	3.85			

MORPHOLOGICAL CHARACTERS OF 26 AN NASIRIYA FEMALES

Skin.—No. 4422 had a fairer skin than that of other tribeswomen. No. 4423 had light skin especially on the forehead. No. 4424, a Negroid admixture, had a pale brown skin with darker blotches. She was seven months pregnant and looked very ill.

Head Form.—No. 4421 had wide, high flat area on occiput.

Hair.—Nos. 4426, 4427, and 4434 had low-growing hair on the forehead. No. 4427 had some hair growing down to her eyebrows. No. 4429 had very matted hair and No. 4432 had thick hair. Nos. 4422 and 4439 had hair "plastered" with henna paste.

HAIR

Color	No.	Per cent	Form	No.	Per cent
Black	8	30.77	Straight	0	
Very dark brown	0		Very low waves	4	16.67
Dark brown	12	46.15	Low waves	17	70.83
Brown	0		Deep waves	2	8.33
Reddish brown	0		Curly-frizzly	1	4.17
Light brown	0		Woolly	0	
Red	0		Total	24	100.00
Black and gray	4	15.38	Texture	No.	Per cent
Dark brown and gray	2	7.69	Coarse	7	28.00
Light brown and gray	0		Coarse-medium	0	
Gray	0		Medium	11	44.00
White	0		Medium-fine	0	
Total	26	99.99	Fine	7	28.00
			Total	25	100.00

Eyes.—Six women (Nos. 4420, 4429, 4431, 4432, 4435, and 4442) had blue-ringed irides, possibly the result of *arcus senilis*.

Nos. 4419, 4433, and 4443 had filmed eyes. No. 4419 claimed that she was unable to distinguish colors, while No. 4433, who had a bluish film over both eyes, had very poor vision.

EYES

Color	No.	Per cent	Sclera	No.	Per cent
Black.....	1	4.17	Clear.....	7	30.43
Dark brown.....	23	95.83	Yellow.....	5	21.74
Blue-brown.....	0	.....	Speckled.....	0	.....
Blue-brown.....	0	.....	Bloodshot.....	10	43.48
Green-brown.....	0	.....	Speckled and bloodshot.....	0	.....
Green-brown.....	0	.....	Speckled and yellow.....	0	.....
Gray-brown.....	0	.....	Yellow and bloodshot.....	1	4.35
Blue.....	0	.....		
Gray.....	0	.....	Total.....	23	100.00
Light brown.....	0	.....		
Blue-gray.....	0	.....		
Blue-green.....	0	.....		
Total.....	24	100.00			

Nose.—The nasal tip was either depressed (9) or elevated (7). No. 4424 had a slightly thicker than average nasal tip and No. 4433 was in the double plus category. Eight individuals had a convex and three a straight septum. The septum inclination was up in twelve individuals and down in four.

No. 4439 had a very small nose. No. 4425 had a small nose, especially at the tip. There was no nasion depression. No. 4422 had a very low nasal bridge.

NOSE

Profile	No.	Per cent	Wings	No.	Per cent
Wavy.....	0	.....	Compressed.....	6	23.08
Straight.....	6	23.08	Compressed-medium.....	1	3.85
Concave.....	11	42.31	Medium.....	12	46.15
Convex.....	2	7.69	Medium-flaring.....	3	11.54
Concavo-convex.....	7	26.92	Flaring.....	4	15.38
			Flaring plus.....	0	.....
Total.....	26	100.00	Total.....	26	100.00

Teeth.—Nos. 4422, 4424, 4426, and 4430 had incomplete eruption. The dental condition was recorded as follows: good, Nos. 4424, 4428, 4431, 4432, and 4439; fair, Nos. 4422 and 4434; bad, No. 4417. Wear was slightly more than average in Nos. 4416, 4417, 4420, 4421, 4428, 4436, 4438, and 4444, and double plus in No. 4419. Some caries was present in Nos. 4423, 4426, 4427, 4429, 4431, 4434, and 4435.

DENTITION

No.	Description
4416	Teeth stained
4419	Teeth stained
4420	Teeth stained
4421	Teeth slightly stained
4422	Teeth slightly stained
4423	Teeth stained from tobacco and <i>mudawwad</i> ("eaten or affected by worms," the usual expression for decayed)
4424	Teeth slightly stained
4425	Teeth white, but several broken off
4426	First molars decaying
4427	Teeth slightly stained
4430	Teeth stained, crooked
4433	Teeth stained
4434	Teeth somewhat stained
4435	Teeth crooked
4438	Teeth slightly yellow
4439	Teeth white, strong-looking
4440	Brass covering on two upper incisors, price two annas (=4 U. S. cents).
4443	Lower incisors and others lost "from excessive tea-drinking"
4444	Teeth stained

TEETH

Bite	No.	Per cent	Loss	No.	Per cent
Under	0	.....	None	2	16.67
Edge-to-edge	3	11.54	1-4	6	50.00
Slight over	11	42.31	5-8	0	.....
Marked over	12	46.15	9-16	3	25.00
			17-	1	8.33
Total	26	100.00	All	0	.....
			Total	12	100.00

Condition	No.	Per cent
Very bad	0	.....
Bad	1	12.50
Fair	2	25.00
Good	5	62.50
Excellent	0	.....
Total	8	100.00

Lips.—No. 4424, Negroid, had slightly more than average eversion of the lips.

Prognathism.—Nos. 4427 and 4430 had some alveolar prognathism.

Henna.—Nos. 4422, 4423, 4427, 4428, 4433, 4439, and 4440 had applied henna to the hair.

Tattooing.—All the women bore tattooed designs, twenty-four extensively.

Branding.—No branding was recorded.

STATISTICAL ANALYSES OF AN NASIRIYA FEMALES

Stature.—The mean was 156.45, range 146-169.

STATURE		No.	Per cent
Harvard System			
Very small (x-139).....	0	.....
Small (140-148).....	2	7.69	
Medium (149-159).....	19	73.08	
Tall (160-169).....	5	19.23	
Very tall (170-x).....	0	.....
Total.....	26	100.00	

Sitting Height (Trunk Length).—The mean was 80.26, range 75-89.

SITTING HEIGHT (Trunk Length)		No.	Per cent
Group			
Very short (x-68.9).....	0	.....
Short (69.0-73.9).....	0	.....
Medium (74.0-78.9).....	14	53.85	
Long (79.0-83.9).....	10	38.46	
Very long (84.0-x).....	2	7.69	
Total.....	26	100.00	

Head Measurements and Indices.—The mean head breadth was 140.80 (range 132-149). The mean minimum frontal diameter was 102.02 (range 93-112). The mean cephalic index was 77.64 (range 71-85).

HEAD BREADTH		No.	Per cent
Group			
Very narrow (x-129).....	0	.....
Narrow (130-139).....	9	36.00	
Wide (140-149).....	16	64.00	
Very wide (150-x).....	0	.....
Total.....	25	100.00	

No. 4432 was omitted.

MINIMUM FRONTAL DIAMETER		No.	Per cent
Group			
Very narrow (x-99).....	6	24.00	
Narrow (100-109).....	18	72.00	
Wide (110-119).....	1	4.00	
Very wide (120-x).....	0	.....
Total.....	25	100.00	

No. 4423 was omitted.

CEPHALIC INDEX				No.	Per cent
Harvard System	No.	Per cent	Keith System	No.	Per cent
Dolichocephalic.....	9	36.00	Ultradolichocephalic... (x-70.0)	0	.....
Mesocephalic.....	15	60.00	Dolichocephalic..... (70.1-75.0)	4	16.00
Brachycephalic.....	1	4.00	Mesocephalic..... (75.1-79.9)	16	64.00
Total.....	25	100.00	Brachycephalic..... (80.0-84.9)	5	20.00
			Ultrabrachycephalic... (85.0-x)	0	.....
			Total.....	25	100.00

No. 4432 was omitted.

Facial Measurements and Indices.—The mean upper facial height was 66.60 (range 60–79). The mean total facial height was 107.60 (range 95–114). The mean index was 84.20 (range 76–95).

FACIAL MEASUREMENTS AND INDICES

Upper facial height	No.	Per cent	Total facial height	No.	Per cent
Short..... (x-63)	6	23.08	Short..... (x-109)	16	64.00
Medium short..... (64-69)	16	61.54	Medium short..... (110-119)	9	36.00
Medium long..... (70-75)	3	11.54	Medium long..... (120-129)	0	.....
Long..... (76-x)	1	3.85	Long..... (130-x)	0	.....
Total.....	26	100.01	Total.....	25	100.00

Total facial index	No.	Per cent
Euryprosopic (x-84.5).....	13	52.00
Mesoprosopic (84.6-89.4).....	11	44.00
Leptoprosopic (89.5-x).....	1	4.00
Total.....	25	100.00

No. 4423 was omitted.

Nasal Measurements and Indices.—The mean nasal height was 46.26 (range 36–55). The mean width was 32.72 (range 28–42). The mean nasal index was 71.26 (range 56–91).

NASAL MEASUREMENTS AND INDICES

Nasal height	No.	Per cent	Nasal width	No.	Per cent
Short..... (x-49)	20	76.92	Very narrow..... (x-29)	2	8.00
Medium..... (50-59)	6	23.08	Medium narrow..... (30-35)	21	84.00
Long..... (60-x)	0	.....	Medium wide..... (36-41)	1	4.00
Total.....	26	100.00	Wide..... (42-x)	1	4.00
			Total.....	25	100.00

Nasal index	No.	Per cent
Leptorrhine (x-67.4).....	8	32.00
Mesorrhine (67.5-83.4).....	14	56.00
Platyrrhine (83.5-x).....	3	12.00
Total.....	25	100.00

No. 4440 was omitted.

The following tables have been added so that statistical comparisons can be made with the groups in Field (1939) and in Part I, No. 1, of *The Anthropology of Iraq*.

SITTING HEIGHT (Trunk Length)

	840-x		790-839		740-789		690-739		689-x		Totals	
Standing height	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1880-x	0	....	0	....	0	....	0	....	0	....	0	....
1700-1870	0	....	0	....	0	....	0	....	0	....	0	....
1600-1690	2	7.69	3	11.54	0	....	0	....	0	....	5	19.23
1490-1590	0	....	7	26.92	12	46.15	0	....	0	....	19	73.07
1400-1480	0	....	0	....	2	7.69	0	....	0	....	2	7.69
x-1390	0	....	0	....	0	....	0	....	0	....	0	....
											26	99.99

MINIMUM FRONTAL DIAMETER

	x-99		100-109		110-119		120-x		Totals	
Head breadth	No.	%	No.	%	No.	%	No.	%	No.	%
120-129.....	0		0		0		0		0	
130-139.....	2	8.00	7	28.00	0		0		9	36.00
140-149.....	4	16.00	11	44.00	1	4.00	0		16	64.00
150-x.....	0		0		0		0		0	
									25	100.00

BIZYGOMATIC BREADTH

	x-124		125-134		135-x		Totals	
Total facial length	No.	%	No.	%	No.	%	No.	%
x-114.....	5	20.00	20	80.00	0	....	25	100.00
115-124.....	0	.....	0	.....	0	.....	0	.....
125-x.....	0	.....	0	.....	0	.....	0	.....
							25	100.00

UPPER FACIAL LENGTH

	x-63		64-69		70-75		76-81		82-x		Totals	
Total facial length	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
x-109.....	5	20.00	10	40.00	1	4.00	0	....	0	....	16	64.00
110-119.....	0	.....	6	24.00	2	8.00	1	4.00	0	....	9	36.00
120-129.....	0	.....	0	.....	0	.....	0	.....	0	....	0	.....
130-x.....	0	.....	0	.....	0	.....	0	.....	0	....	0	.....
											25	100.00

NASAL WIDTH

	x-29		30-35		36-41		42-x		Totals	
Nasal length	No.	%	No.	%	No.	%	No.	%	No.	%
x-49.....	1	4.00	18	72.00	1	4.00	0	....	20	80.00
50-59.....	1	4.00	3	12.00	0	....	1	4.00	5	20.00
60-x.....	0	....	0	....	0	....	0	....	0	....
									<u>25</u>	<u>100.00</u>

MEASUREMENTS OF AN NASIRIYA FEMALES

No.	Age	Stature	SH	L	B	B'	J	go-go	GH	G'H	NH	NB
4416	40	1546	785	188	134	100	121	98	108	69	45	33
4417	35	1591	818	183	136	103	130	104	111	66	48	37
4418*	16	1576	805	183	141	102	124	93	104	61	42	31
4419	50	1661	890	191	147	109	134	104	112	70	51	30
4420	28	1541	789	174	144	101	130	100	108	66	46	34
4421	38	1554	838	178	146	99	130	101	102	62	43	33
4422	17	1595	834	175	141	110	130	94	103	61	39	35
4423	18	1555	781	180	139	...	121	96	...	62	45	32
4424	17	1656	813	181	142	102	131	96	114	69	45	32
4425	30	1520	797	182	145	99	130	92	107	66	48	32
4426	19	1693	805	181	136	95	120	92	105	66	43	29
4427	22	1471	779	177	140	99	126	98	106	65	46	30
4428	28	1583	796	180	141	102	127	90	110	70	52	34
4429	38	1534	783	195	148	101	128	99	109	68	47	32
4430	18	1525	785	176	134	101	126	92	103	61	37	32
4431	30	1464	775	171	141	102	122	90	105	65	49	32
4432	22	1526	784	168	(140)§	104	126	90	105	65	46	30
4433	48	1540	771	190	139	104	128	100	114	77	50	35
4434	25	1577	813	176	135	100	128	92	109	70	50	29
4435	20	1567	798	176	143	99	127	95	105	65	48	33
4436	35	1665	882	188	145	105	125	101	112	66	44	35
4437*	15	1620	803	180	139	102	119	96	110	70	44	34
4438	35	1682	812	184	144	105	132	102	110	66	48	34
4439	33	1505	779	179	136	101	122	100	100	62	42	31
4440	18	1520	776	178	142	100	127	97	113	69	51	...
4441*	15	1521	774	171	144	100	124	92	106	68	47	35
4442	35	1532	781	182	143	105	130	95	110	64	47	32
4443	40	1529	779	190	145	104	134	104	(108)§	68	50	42
4444	25	1546	771	182	134	97	118	86	99	63	44	31
4445*	28	1587	818	189	144	110	134	98	103	63	45	39
4446*	20	1439	756	191	139	97	124	88	102	63	46	33
4447*	30	1426	701	185	140	100	124	89	104	65	43	31
4448*	17	1492	773	181	138	103	125	99	112	70	47	39
4449*	15	1526	779	180	140	101	128	102	114	69	45	(33)†
4450*	14	1560	805	180	135	100	126	98	107	65	44	38
4451*	14	1516	759	176	137	102	119	88	104	62	45	30
4452*	29	1551	826	178	136	104	129	92	101	61	41	33
4453*	16	1572	781	163	145	101	125	95	107	66	48	31
4454*	35	1508	813	169	138	97	121	87	116	73	49	32
4455*	43	1512	770	182	135	97	127	98	(107)	(68)‡	49	34

* Omitted from means.

‡ Edentulous.

† Nose stretched by nose ring.

§ Measurement uncertain.

MEASUREMENTS OF AN NASIRIYA FEMALES

Measurements	No.	Range	Mean	S.D.	C.V.
Age.....	26	16-54	29.90±1.32	10.00±0.94	33.44±3.13
Stature.....	26	146-169	156.45±0.75	5.70±0.53	3.64±0.34
Sitting height.....	26	75-89	80.26±0.38	2.91±0.27	3.63±0.34
Head length.....	26	167-196	181.05±0.85	6.39±0.60	3.53±0.33
Head breadth.....	25	132-149	140.80±0.61	4.50±0.43	3.20±0.31
Min. frontal diam.....	25	93-112	102.02±0.51	3.80±0.36	3.72±0.35
Bizygo. diam.....	26	115-134	127.60±0.56	4.25±0.40	3.33±0.31
Bigonial diameter.....	26	86-105	96.58±0.60	4.52±0.42	4.68±0.44
Total facial height.....	25	95-114	107.60±0.55	4.10±0.39	3.81±0.36
Upper facial height.....	26	60-79	66.60±0.48	3.65±0.34	5.48±0.51
Nasal height.....	26	36-55	46.26±0.51	3.84±0.36	8.30±0.78
Nasal breadth.....	25	28-42	32.72±0.38	2.85±0.27	8.71±0.83
Ear length.....	26	48-71	59.82±0.64	4.84±0.45	8.09±0.76
Ear breadth.....	26	26-40	32.76±0.37	2.76±0.26	8.42±0.79

INDICES OF AN NASIRIYA FEMALES

No.	EL	EB	RSH	B/L	B'/B	GH/J	G'H/J	NB/NH	EB/EL	go-go/J	B'/J
4416	59	34	50.8	71.3	74.6	89.3	57.0	73.3	57.6	80.9	82.6
4417	68	39	51.4	74.3	75.7	85.4	50.8	77.1	57.3	80.0	79.2
4418	60	32	51.1	77.0	72.3	83.9	49.2	73.8	53.3	75.0	82.3
4419	66	36	53.6	76.9	74.1	83.6	52.2	58.8	54.5	77.6	81.3
4420	61	34	51.2	82.8	70.1	83.1	50.8	73.9	55.7	76.9	77.7
4421	58	34	53.9	82.0	67.8	78.5	47.7	76.7	58.6	77.7	76.1
4422	62	34	52.3	80.5	78.0	79.2	46.9	89.7	54.8	72.3	84.6
4423	62	30	50.2	77.2	....	....	51.2	71.1	48.4	79.3	....
4424	61	31	49.1	78.5	71.8	87.0	52.7	71.1	50.8	73.3	77.8
4425	51	32	52.4	79.7	68.3	82.3	50.8	66.7	62.7	70.8	76.1
4426	57	30	47.5	75.1	69.8	87.5	55.0	67.4	52.6	76.6	79.3
4427	53	30	52.9	79.1	70.7	84.1	51.6	65.2	56.6	77.8	78.6
4428	62	30	50.3	78.3	72.4	86.6	55.1	65.4	48.4	70.8	80.2
4429	64	35	51.0	75.9	68.2	85.1	53.1	68.1	54.7	77.3	78.8
4430	57	28	51.4	76.1	75.4	81.7	48.4	86.5	49.1	73.0	80.1
4431	54	30	52.9	82.5	72.3	86.1	53.3	65.3	55.6	73.8	83.6
4432	58	30	51.3	....	....	83.3	51.6	65.2	51.7	71.4	82.5
4433	68	36	50.1	73.2	74.8	89.1	60.1	70.0	52.9	78.1	81.2
4434	60	32	51.6	76.7	74.1	85.1	54.7	58.0	53.3	71.9	78.1
4435	59	32	50.9	81.2	69.2	82.7	51.2	68.7	54.2	74.8	77.9
4436	65	36	52.9	77.1	72.4	89.6	52.8	79.5	55.4	80.8	84.0
4437	58	26	49.6	78.3	73.4	92.4	58.8	77.3	44.8	80.7	85.7
4438	57	33	48.2	78.3	72.9	83.3	50.0	70.8	57.9	77.3	79.5
4439	58	32	51.8	75.9	74.2	81.9	50.8	73.8	55.2	81.9	82.8
4440	57	30	51.1	79.7	70.4	88.9	54.3	....	52.6	76.3	78.7
4441	55	30	50.9	84.2	69.4	85.5	54.8	74.5	54.5	74.2	80.6
4442	56	35	50.9	78.6	73.4	84.6	49.2	68.1	62.5	73.1	80.8
4443	65	35	50.9	76.3	71.7	80.6	50.7	84.0	53.8	77.6	77.6
4444	54	33	49.9	73.6	72.4	83.9	53.4	70.5	61.1	72.9	82.2
4445	..	..	51.5	76.2	76.4	76.8	47.0	86.7	....	73.1	82.1
4446	62	32	52.5	72.7	69.8	82.3	50.8	71.7	51.6	70.9	78.2
4447	(59)	30	49.2	75.7	71.4	83.9	52.4	72.1	50.8	71.8	80.6
4448	55	32	51.8	76.2	74.6	89.6	56.0	82.9	58.2	79.2	82.4
4449	55	26	51.0	77.8	72.1	89.1	53.9	73.3	47.3	79.7	78.9
4450	57	31	51.6	75.0	74.1	84.9	51.6	86.4	54.4	77.8	79.3
4451	57	32	50.1	77.8	74.5	87.4	52.1	66.7	56.1	73.9	85.7
4452	61	34	53.2	76.4	76.5	78.2	47.3	80.5	55.7	71.3	80.6
4453	57	33	49.6	88.9	69.6	85.6	52.8	64.6	57.9	76.0	80.8
4454	61	37	53.9	81.6	70.3	95.8	60.3	65.3	60.6	71.9	80.1
4455	66	32	50.9	74.2	71.9	84.2	53.5	69.4	48.5	77.1	76.3

INDICES OF AN NASIRIYA FEMALES

Indices	No.	Range	Mean	S. D.	C. V.
Relative sitting height.....	26	48-55	51.12±0.20	1.54±0.14	3.01±0.28
Cephalic.....	25	71-85	77.64±0.40	2.97±0.28	3.83±0.37
Fronto-parietal.....	24	66-80	72.37±0.41	3.00±0.29	4.15±0.40
Zygo-frontal.....	25	76-87	80.06±0.37	2.76±0.26	3.45±0.33
Zygo-gonial.....	26	69-83	76.00±0.48	3.63±0.34	4.78±0.45
Total facial.....	25	76-95	84.20±0.47	3.50±0.33	4.16±0.40
Upper facial.....	26	46-60	51.95±0.40	3.00±0.28	5.77±0.54
Nasal.....	25	56-91	71.26±1.06	7.84±0.75	11.00±1.05
Ear.....	26	45-64	55.10±0.54	4.12±0.39	7.48±0.70

VITAL STATISTICS† OF AN NASIRIYA FEMALES

Number	Age	Married	No. of years	Sons	Daughters	Brothers	Sisters
4416	40	1	....	0, 0	1, 0	....	....
4417	35	1	....	1, 0	1, 0	....	....
4418*	16	1	1	...	...	....	....
4419	50	1	....	1, 1	2, 1	....	....
4420	28	1	....	0, 0	2, 1	....	....
4421	38	1	....	2, (many)	1, (many)	....	....
4422	17	1	2	1, 0	0, 0	....	....
4423	18	1	2	...	1, 1	....	....
4424	17	1	1	...	...	....	....
4425	30	1	....	1, 2	1, 2	....	....
4426	19	1	5	1, 0	0, 0	....	....
4427	22	1	9	1, 0	1, 0	....	....
4428	28	1	....	1, 0	0, 0	....	....
4429	38	1	many	...	...	....	....
4430	18	1	....	...	...	....	....
4431	30	1	....	0, 0	2, 1	....	....
4432	22	1	....	0, 1	1, 0	....	....
4433	48	1	....	0, 4	2, 0	....	....
4434	25	1	10	1, 0	1, 0	....	....
4435	20	1	8	1, 0	0, 0	....	....
4436	35	1	....	1, 4	4, 0	....	....
4437*	15	0	....	...	...	....	....
4438	35	1	....	1, 0	2, 0	....	....
4439	33	.	....	1, 0	0, 0	....	....
4440	18	0	....	...	...	....	....
4441*	15	0	....	...	...	....	....
4442	35	1	....	2, 2	1, 2	....	....
4443	40	.	....	1, 0	1, 0	....	....
4444	25	1	8	0, 0	2, 0	....	....
4445*	28	1	....	0, 4	0, 3	....	....
4446*	20	1	11½	0, 0	1, 0	....	....
4447*	30	1	16	6, 0	2, 0	....	....
4448*	17	0	....	...	...	....	....
4449*	15	0	....	...	...	....	....
4450*	14	0	....	...	...	....	....
4451*	14	1	10 days	...	...	....	....
4452*	29	1	....	0, 0	5, 0	....	....
4453*	16	0	....	...	...	....	....
4454*	35	2	....	0, 1	0, 0	....	....
4455*	43	1	....	2, 3	0, 0	....	....

† Italicized numbers refer to deceased children.

* Omitted from averages.

MORPHOLOGICAL CHARACTERS OF AN NASIRIYA FEMALES

No.	HAIR			EYES			NOSE	
	Form	Texture	Color	Color	Sclera	Iris	Profile	Wings
4416	l w	medium	br-gray	dk br	blood	...	c-c	medium
4417	l w	medium	blk	dk br	yellow	...	c-c	medium
4418*	v l w	fine	dk br	dk br	clear	...	conc	medium
4419	l w	medium	blk, gray	.....	.....	...	c-c	comp
4420	l w	fine	blk	dk br	clear	...	str	medium
4421	l w	medium	blk	dk br	yellow	...	conc	flar
4422	...	.....	blk	blk	.....	...	conc	flar
4423	v l w	fine	dk br	dk br	yellow	...	c-c	medium
4424	c-f	coarse	dk br	dk br	blood	...	conc	comp
4425	l w	medium	dk br	dk br	clear	...	conc	comp
4426	l w	medium	blk	dk br	clear	...	str	comp-med
4427	v l w	fine	dk br	dk br	blood	...	str	medium
4428	l w	coarse	dk br	dk br	clear	...	c-c	medium
4429	l w	fine	dk br	dk br	blood	...	conc	comp
4430	l w	medium	dk br	dk br	clear	...	conc	flar
4431	l w	coarse	blk	dk br	clear	...	conc	medium
4432	v l w	coarse	blk	dk br	yellow-blood	...	str	medium
4433	l w	medium	br-gray	.....	.....	...	conc	med-fl
4434	l w	medium	dk br	dk br	blood	...	str	comp
4435	l w	coarse	dk br	dk br	blood	...	c-c	med-fl
4436	l w	medium	blk	dk br	blood	...	conc	med-fl
4437*	l w	medium	dk br	dk br	clear	...	conc	medium
4438	l w	fine	blk, gray	dk br	blood	...	conv	medium
4439	...	fine	dk br	dk br	yellow	...	conc	comp
4440	v l w	fine	dk br	dk br	yellow	...	conv	medium
4441*	v l w	fine	dk br	dk br	clear	...	conc	medium
4442	d w	coarse	blk, gray	dk br	clear	...	conc	medium
4443	l w	medium	blk, gray	dk br	blood	...	c-c	flar
4444	d w	coarse	dk br	dk br	blood	...	str	medium
4445*	l w	.....	blk	dk br	blood	...	str	flar
4446*	v l w	coarse	dk br	dk br	clear	...	conc	medium
4447*	d w	coarse	red-br	dk br	clear	ray	c-c	medium
4448*	l w	fine	dk br	dk br	.....	...	conc	flar
4449*	l w	medium	blk	dk br	clear	...	conc	flar
4450*	l w	medium	blk	dk br	clear	...	conc	flar
4451*	l w	medium	brown	gray-br	clear	...	c-c	medium
4452*	l w	coarse	blk	dk br	yellow	...	conc	flar
4453*	v l w	coarse	dk br	dk br	clear	...	str	comp
4454*	l w	fine	dk br	gray-br	clear	...	conv	comp
4455*	l w	fine	br-gray	lt br†	blood	...	str	medium

* Omitted from means.

† Dark speckled.

INDIVIDUALS OMITTED FROM THE STATISTICAL SERIES

Four individuals were omitted because of age; these were No. 4418 (16) from An Nasiriya, No. 4437 (15) from the Al Uzairij tribe near An Nasiriya, No. 4441 (15) from Basra, and No. 4453 (16), a Subbi from An Nasiriya. The remaining group, omitted primarily because they came from diverse localities, consisted of No. 4445, a Dulaimi from Samarra; Nos. 4446 and 4447, Jews from Baghdad; Nos. 4448, 4449 (15), and 4450 (14), a gypsy (*kaulia*); No. 4451 (14),

a Subbi from Suq ash Shuyukh; Nos. 4452 and 4454, Subba; and No. 4455, a Turkoman(?) from An Najaf.

Demography.—No. 4441 was a sister of No. 4440 and No. 4451 was a daughter of No. 4452.

Skin.—No. 4447 had a light freckled skin.

Hair.—Seven individuals had dark brown and four black hair. No. 4451 had brown, No. 4447 red-brown, and No. 4455 brown-gray hair. There were four individuals in each of the medium and coarse categories of hair texture. Five individuals had fine hair. The majority had low wavy hair, four very low wavy, and one deep wavy hair. No. 4453 had cut her hair in mourning.

Eyes.—The majority had dark brown eyes. Nos. 4451 and 4454 had gray-brown eyes and No. 4455 light brown with dark specks. Nos. 4445 and 4455 had bloodshot, No. 4452 yellow, and the remainder clear sclera. No. 4447 had rayed irides. Only one individual had gray-ringed eyes. No. 4441 had her right eye turned inward.

Nose.—Three individuals had a straight profile, two a concavo-convex, one a convex, and the remainder concave profiles. Nos. 4453 and 4454 had compressed wings. Five individuals had flaring and the remainder medium wings. Tip thickness was average plus in No. 4453. Nos. 4437, 4447, and 4455 had elevated nasal tips while Nos. 4446, 4453, and 4454 had depressed tips. No. 4418 had a very small nose. Nos. 4445 and 4418 had low nasal bridges.

While No. 4437 had a straight septum with an upward inclination, No. 4453 had a straight septum with a downward inclination. Nos. 4446, 4447, 4454, and 4455 had convex septa with upward inclinations.

DENTITION

No.	Bite	Loss	Wear	Description
4418	marked over	....	.....	slight stain near gums
4437	marked over	....	.....	.....
4441	marked over	....	.....	crooked; rather yellow; brass cap on 2
4445	edge-to-edge	1-4	.....	.....
4446	slight over	none	slight	stained
4447	slight over	1-4	average+	stained yellow
4448	edge-to-edge	1-4	.....	lower first molar lost
4449	slight over	....	.....	gold plated upper lateral incisors
4450	marked over	....	.....	slightly stained; one gold tooth
4451	slight over	1-4	.....	stained
4452	slight over	9-16	average+	stained
4453	slight over	....	.....	several molars broken
4454	marked over	1-4	average+	stained
4455	.....	17+	.....	.....

Teeth.—Five individuals had marked-over occlusion, six slight-over and two edge-to-edge. No. 4418 had good, No. 4449 excellent, and Nos. 4445 and 4451 bad teeth. The eruption was incomplete in Nos. 4418, 4437, 4441, 4448-4451, and 4453.

Henna.—No. 4418 had applied some and No. 4455 much henna to the hair.

Tattooing.—Five individuals (Nos. 4437, 4441, 4445, 4450, and 4455) had some tattooing. Nos. 4418, 4448, and 4449 were extensively tattooed.

Branding.—No branding was recorded.

V. ARABS OF THE HOR AL HAWIZA

BY

E. S. DROWER¹

Linguistic Notes.—For the sake of convenience and simplicity the following system of transliteration of Arabic words has been used. The system, with few changes, is basically that adopted by the Oriental Institute of the University of Chicago.² Because of difficulties of typesetting, those consonants that are represented by two English letters are not underlined, and instead of *k*, *q* has been used.

Other modifications from the classical Arabic result from the fact that the spelling is intended to show the exact dialectal sounds heard among the marsh-dwelling Arabs, who live east of al-'Amāra. All modern dialects of Arabic differ in vowel values from the system set up for the classical language. The diphthong *ai* becomes *ē* (as in fete), and *ō* replaces *au* and sometimes *ū*; *ā*, *ī*, and *ū* remain the same as in classical Arabic, but *ě* (as in met) is frequently heard as well as *ǎ*, *ǐ*, and *ǔ*. In certain cases the vowel has disappeared entirely. Consonantal sounds occurring in this dialect in addition to those of the classical language are *g*, a phonetic development from *q*; *ch* (as in chat), a phonetic development from *k*; and *p* and *zh* (as in azure). The final *h* of feminine nouns has been omitted. The assimilation of *l* in the article to the following consonant is not indicated. *Hamza* at the beginning of a word has been disregarded.

The marshes of southern 'Irāq, sometimes called the Great Swamp and known to the 'Irāqī as Al-Hōr, must have existed since very early times, for the country is alluvial, low-lying, and

¹ Lady Drower accompanied the Expedition to the Hor al Hawiza during April, 1934, in order to record details of the life and customs of the marsh-dwellers. Her special knowledge of Arabic and Mandaean served her in good stead during the compilation of these data. Since her philological records are of unusual significance we have decided to include the diacritical marks throughout this chapter rather than to relegate them to the Glossary, as was done in Part I, No. 1. The sections of this chapter have been edited to conform to the general plan adopted for publication of the data from Iraq.

During the war the original notes on this section were destroyed and correction has therefore been hampered.

² Brux, A. A., "Arabic-English Transliteration for Library Purposes," in *American Journal of Semitic Languages and Literatures*, vol. 47, No. 1, pt. 2, October, 1930.

subject to inundation when the Tigris and Euphrates are in flood. The district was inhabited during the Babylonian and, according to some archeologists, during the Sumerian epochs, although this is not verified, as the mounds rising above the expanse of reeds and waters have not yet been excavated. On the slopes of several great mounds, at al-'Azīziya, Wājif, and elsewhere, lie many potsherds, which would seem to indicate former large settlements. The word *tell* is not used by the marshman to designate these hills, for such a mound, called an *ishān*, is thought to be protected by the magic of dead civilization. Indeed it is related that a man, digging for buried treasure on the mound known as Abū al-Dhahab ("Father of gold"), was suddenly smitten from behind by a *melek*, a spirit supposed to haunt graveyards and lonely places, so that he died. No doubt the prosperous Babylonian marsh-dwellers, like the present day marshmen, traded in rice and other grain, fish, straw, reeds, reed mats, and such commodities.

The historian, al-Balādhurī, describes the marshes as covering an area fifty miles broad and two hundred miles long and stretching from al-Kūfa to Baṣra. He attributes their origin to the reign of Kubādh IV, a Sasanian king of the fifth century A.D. During this period the Tigris burst its confining banks and dykes, flooding all the low country to the south and southwest. In A.D. 629, the Tigris and Euphrates both rose in a mighty flood, spreading over the reclaimed land. The Sasanian king, Parviz, fought heroically against the encroaching waters, but his task was too much for him. When the Moslems came in hordes from Arabia and the Sasanian monarchs departed, the dykes were not repaired and the marshes were not reclaimed. Even then, however, the remains of some prosperity persisted, and in the earlier years of the Caliphate, attempts were made to repair old earthworks and dykes, and to reclaim the land. The Mongols and Turks, however, completed the ruin.

Thus, after centuries of neglect the vast swamps of today are given over chiefly to waterfowl, wild boar, and otters, and the waste of waters, reeds and rushes is populated only by poor communities living under primitive conditions.

Plant life flourishes. The surface of the swamp water is covered with the liliaceous leaves of the *ga'ība*, which is often dried and pounded into a powder said to be beneficial when blown into the eyes of cattle. In spring the white blossoms of a water weed (*uzhēr al-baṭṭ*) rise above the surface of the water.

Although land on the islands is cultivated throughout the marshes, areas of intense cultivation such as those near the Chahalā

(Kahalā), Majar al-Kabīr, and other small rivers and their tributaries are found only on the western fringes of the great swamp.

The villages are built of reeds and the roads are chiefly waterways. In a few of the district villages the sheikhs' houses can be reached by automobile. For instance, the old, dismantled railway from al-Baṣra to al-'Amāra is used as a road by people of Qal'at Sālih because it is raised above the surrounding country and is therefore immune to floods. Between Halfāya and al-'Amāra there is also a good automobile road. Within the marsh itself, however, waterways are the sole means of communication.

The principal tribes of these marsh districts are the Āl bu Muḥammad, the Āl Suwā'ad,¹ the Āl Sūdān, the Uzairij, and the Banī Lām. The leading sheikhs of the Uzairij are Sheikh Shawwai al-Fahad and Sheikh Mutlaq al-Salmān, who has succeeded Sheikh Salmān al-Minshad.

Qal'at Sālih is the district proper of the Āl bu Muḥammad. It extends from Majar al-Kabīr to the Hōr al-Hawiza from west to east, but the tribesmen also follow the banks of the Chahalā River, a tributary of the Tigris, from al-'Amāra, and those of the Majar al-Kabīr, the Michiriya, the Shaṭṭ, the Kasra, and Hafīra, all of which eventually lose themselves in the marsh.

The Āl bu Muḥammad are farmers, makers of reed mats, and fishermen. They are a large tribe and in times past have been wealthy, although, owing to the poor price obtained for grain during recent years, they have become impoverished. Their principal sheikhs are Fāliḥ al-Ṣaiḥūd,² to whom most of the tillage on and about the Chahalā belongs, Muḥammad al-'Araibī, who is a member of the Chamber of Deputies, and Majīd al-'Khalifa, who sometimes leased the Government *Muqāṭa'a* of Majar al-Kabīr and is a well-known agriculturist, and finally Ṭāhir al-Ḥātim, who lives near Ezra's Tomb (al-'Uzair).

Of all the marsh sheikhs the one most universally respected, and the one whose word has most weight in any council, is undoubtedly Sheikh Fāliḥ al-Ṣaiḥūd, although Sheikh Ghaḍbān of the Banī Lām was formerly a man of power and wealth. (His successor, Sheikh Ḥātim, has neither his wealth nor his prestige.) Sheikh Fāliḥ's power is, however, that of personality, for he is a

¹ Lady Drower prefers the use of the "u" in the spelling of Al Sawā'ad. (H.F.)

² Since dead. The writer describes conditions as she found them in 1934. Conditions changed radically during and since World War II, both politically and economically.

remarkable character, and his massive physique is as impressive as his vast hospitality, his generous character, and his great physical strength. An old man, possibly eighty-five years of age, he shoots far better than the younger men. He weighs about three hundred pounds, is tall, tireless, jovial, and dignified. Although he holds many conservative ideas, including a sterner code of honor than some of the more modern of his contemporaries, he has built a school for his tribesmen and encourages the activities of the Government doctor, whose services are much needed.

The Suwā'ad interpenetrate but do not mix with the Āl bu Muḥammad. Some of the Suwā'ad are also found north of the Sūdān tribesmen, who inhabit the district between the Musharra and the Chahalā rivers as far northwest as al-'Amāra and as far south as Bahatha on the southwest and Hōr on the southeast. They are cattle-keepers and farmers. Muḥammad al-Mūsā and Shibl al-Shiya are the leading sheikhs.

The Sūdān also grow rice and other grains. They are taller and darker than their neighbors, the Suwā'ad.

The Banī Lām, a sheep-owning tribe that formerly possessed great wealth, are still more or less nomadic. In the past a constant feud between them and the Āl bu Muḥammad was ready to erupt at any time, especially under a weak government. They are now on good terms, and the old feud has not manifested itself seriously in recent years.

Since the Banī Lām extend to the northeast of the al-'Amāra district and are found chiefly in the plains between the hills of Iran and the Tigris and in the rich grazing lands east of the Shaṭṭ al-Ṭīb, they are not, strictly speaking, a marsh tribe. In summer, when the plains become parched, they move their flocks in search of herbage into the foothills of Iran, a habit that has sometimes led to disputes with the authorities of Iran. Their northernmost sheikh is Jūwī al-Lāzim, and their paramount sheikhs are Ḥātim al-Ghaḍbān, Qumandār al-Fahad, and Alwān al-Jandīl, the last a member of the Chamber of Deputies in Baghdad.¹

AGRICULTURE

The lands owned by the various sheikhs are divided into estates (*maqāṭi'*) and the allotment of the rich, silt-bringing flood water that irrigates the rice crops needs careful adjustment.

¹ Alwān al-Jandīl, Muḥammad al-'Araibi, and Majīd al-'Khalīfa more or less took it in turns to be deputies, two at a time.

Irrigation is chiefly by means of flooding and sometimes by *minzaḥa*; water spreading over land is called *bāryāu* (Pers. *bāriyāb*). In such places the engine-worked pump is unnecessary. The water-wheel (*nā'ūr*) and the *charid* (*karid*), a contrivance for filling water-skins and lifting and emptying them by a pulley (see Field, 1940, Pl. 48), are little used in low-lying lands and not at all in the marshes themselves. The *minzaḥa* is a popular method of irrigating patches in cultivation near the banks of a river, stream, or canal. Two men are required, and a shallow basket daubed with pitch, called the '*arāwī*, is swung down into the stream by means of ropes and hauled up to the bank, where it is emptied at the top of the swing into a water channel. The men work with extraordinary rapidity. For larger areas, flooding is all that is required and, as the land is low-lying, this is easily performed. The water is let in from a shallow gutter (*mishrab*), and fed from a small channel ('*ibra*), which in turn is supplied by a canal (*garma*). Drainage water is termed *suffa*.

The most important product of the whole 'Amāra *Liwā* is rice, the easily flooded land of the marsh country being especially adapted to its cultivation. The best rice is the variety called '*anbar*; other varieties are *shitāl*, *herfī*, and *hewaizawī*. Rice (*rizz* or *timman*) or, more commonly, unhusked rice (*shilib*) is grown in seed beds; when the young shoots have come up they are transplanted into the mud left by the last year's floods. This area is protected by ridges of earth sufficient to keep the water standing at a depth of a few inches above the roots of the young rice. Thus, the *shilib* is transplanted in early spring and is ready for harvest about June or July, according to the quality of the rice and the local conditions.

In the cultivation of rice a triangular harrow of primitive construction (*marāza*) is used. An isosceles triangle is formed of three strong reeds, two slightly overlapping at the apex of the triangle. To the two angles of the base two ropes are fastened. This light harrow is held, apex upward, by one man, while a second man drags it across the rice field by means of the two ropes (Pl. 218), thus levelling the mud and dragging out the shallow-rooted weeds (*daghl*), leaving the rice shoots unharmed. The rice is threshed with the help of oxen, the resulting rice straw (*būh*) being used for fodder, for mixing with clay when making pots or mud walls, or for export into other parts of the country. The rice is stored in a large, round basket-bin (*maṭbuga*), which, when full, is covered over with mud. From time to time the mud cap is broken open, the rice sifted, and

a new cap added. There are often a number of these rice bins in an enclosure fenced about with reeds or with a mud wall (Pl. 64). To prevent buffaloes from breaking down the corners of a reed enclosure, square holes are dug in the ground at each corner (Pl. 57, Fig. 2).

Other crops are wheat (the varieties, *guraiṭa* and *shāfiya*), barley (*sha'ir aswad* and *sha'ir 'Irāqī*), yellow maize (*uḍra safrā*), sorghum (*uḍra baiḍā*), millet (*dukhun* and *māsh khadrāwī*), and lentils (*'adas*). Melons (*baṭṭikh*) and watermelons (*raggī*) are also cultivated and, to a small degree, lady's-fingers, onions, and other vegetables. The cultivator of the melon patch is not called a *fallāḥ*, but a *baghwān*, or gardener.

Millet, grown in mud that cannot be watered after the floods recede, is reaped by hand during September. The earliest harvests are those of wheat and barley, which are gathered in May. Plowing the ground for the sowing of grain also takes place in this month. It is performed by oxen drawing a simple plow (*fiddān*) (Pl. 68, Fig. 1), which consists of a straight tree trunk, usually willow, fitted into a curved cross-piece, one end of which is pointed and shod with iron. The yoke (*nīr*) for the oxen is fitted into holes in the straight piece. The furrow made by plowing is called a *sikka*. The spade (*mishā*), which is used throughout 'Irāq, is shaped to a rounded point and is fitted to a long wooden handle. A wooden cross-piece is inserted just above the iron blade, so that the bare foot can thrust on it when digging.

Agricultural labor is paid in kind. Any money that a marsh tribesman receives is earned by weaving reed mats, building reed huts, and selling dried fish, woollen cloth, or other textiles woven by him or his women. The crafts of boat-building, tool-making, and gold- and silver-working are entirely in the hands of the Ṣubba¹ or Mandeans.

DOMESTIC ANIMALS

In the marsh country the water buffalo is the main domestic animal. The water buffaloes of the Āl bu Muḥammad are famed for their quality. The marsh tribes also keep a slightly humped, small, yellowish-fawn type of cow, extremely mild of temper. Bullocks draw the plows. Donkeys are found everywhere and usually have sores and broken ears, the result of harsh treatment. Goats belong

¹ Although Lady Drower now prefers the use of "a" in Ṣabba, the "u" has been retained throughout this manuscript. (H.F.)

to the common black-and-white variety. Fowl are generally small, but one sometimes sees fowl of small body with powerful legs and feet. This variety is used for cockfighting, a sport of which the Marsh Arabs are fond.

The majority of the wealthier sheikhs have horses of good pedigree. I asked an 'Irāqī friend to give me a list of their breeds. He named: 'Ubāyyat ash-Sherrāf, Ṣaqlāwat al-Jedrān, Shuwaimat as-Sabbāh, Dahamat al-'Amir, Mu'nakiyyat al-Ḥidrij, and Kaḥalat al-'Ajūz. Legend, he said, attributed each name to some incident attending the first owner or to a nickname given to the first horse acquired by him. The animals, according to story, were trapped and stolen from their owners, a horse-owning tribe, during a raid (*ghazū*). 'Ubāyyat ash-Sherrāf, for example, was so called because the mare after having thrown him fled from her new owner with his 'abā' on her back. Ṣaqlāwat al-Jedrān was so named because the Arab who had taken the mare was called Jedrān, and the root *sql* refers to the mare, "Slender-in-the-flanks-and-glossy." Shuwaimat as-Sabbāh means "Little Mole of Sabbāh"; Kaḥalat al-'Ajūz is "The Collyrium of the Old Woman," referring to the animal's blackness; and so on. It is possible that the legend depicts times when the superior strength of tribes owning horses induced less fortunate tribesmen to obtain these animals by ruse.

Buffaloes are easily fed, for their favorite diet is rushes and reeds. These are cut with a slightly curved knife (*minjal*) that has a saw edge and a wooden handle. The knife is used not only for cutting fodder of all kinds, but also for cutting the stout *gaṣab* used in making reed huts, beds, bridges, and punt poles. The *gaṣab* often replace wood throughout the marsh districts.

A platform (*dibin*) on which water buffaloes sleep is made by bending *gaṣab* reeds *in situ*, piling rushes (*bardi*) and mud onto the reeds, and thus building an island. Buffaloes are also kept in a reed pen (*sitra*).

Rice straw, kept in square mud bins, and chopped straw (*tibin*) are also used as fodder for cattle.

The milk-giving animals are the large, black, water buffaloes, cows of a light-colored, slightly humped variety, goats, and sheep. The Banī Lām, who seldom keep cows or buffaloes and do not sell their products, obtain milk from the female camel (*nāgah*). Milking of the buffaloes and cows is performed at the side of the beast, but goats and sheep are milked from behind, between the back legs, while the head of the animal is held by an assistant (Pl. 71).

It is believed that the buffalo and cow will not let their milk flow freely unless the calf is allowed to suck a little before the milker sets to work. If the calf dies, its skin is stuffed and thus made into a dummy (*bāu*) and the mother is allowed to smell at the skin before being milked. Lambs and kids are separated from their mothers while the latter are at pasturage, but they are reunited at sunset.

The sheep of the Banī Lām are their chief wealth. The breed of their animals is that common to the whole country—a sheep which has a fatty base to its tail, known as the *liyya*, from which the animal draws nourishment during days of sparse vegetation; in fact, it corresponds to the camel's hump.

Tribal ownership of an animal is usually indicated by a brand, although one tribe of the Banī Lām inserts a ring into the right ear of the camel. The word for brand (*wasm*) is similar to that used for tattooing (*washm*) in other Arab countries; in 'Irāq, the word for the latter is *daqq*.

HUNTING AND FISHING

Here and there in the marshes a waterway (*gahn*) through the reeds leads to a small space of trampled rushes (*chibāsha*), the lair of wild boar, who may start up and plunge snorting into the shelter of the high reeds. During the breeding season many of these wild pigs migrate from Hawiza and the low ground below the Jabal Hamrīn into this region. The male pig, often the size of a small donkey, has been known to charge upon and upset boats, while it is reported that boars have attacked automobiles on the road between Qal'at Sālih and al-Qurna.

The marshman, who hunts the boar with his light gun (*ja'za* or *tanbal*) or with his antiquated firelock (*bandega*), is fond of relating encounters with these animals. I here give one such narrative.

"A year and a half ago I was bidden to go and collect a party of men to complete making a canal. Riding a white mare I went across country where there were *ṣarīm* [thorns] and *ṭaḥama* [a shrub] and *gheḏām* [undergrowth]. I went, and presently I saw a wild sow [*bagura*] standing in my way. She had a gray body and a red neck and big ears, and long tusks set crosswise, over a foot long, and one eye as big as my hand and the other a little smaller. She had great flapping lips which blew when she wanted to eat, hair on her body, and she stood a little shorter than a man's height. She rose and tracked me, and stopped at about the distance of yonder reed

hut, and I, as it may be, here. I took a small stone and threw it at her. She rose and began to snort and spit at me, and the mare began to tremble and I too trembled, for I had only a stick in my hand, and no gun, and I fled on my mare, who leapt away. I began to weep, and say, 'Whither can I go?' She came after us, until we reached a place where there were buffaloes, and I rode amongst them. She came, the sow, and gored one of the buffaloes with her tusks and the buffalo's belly was torn and it died. Meanwhile I fled on. Still she came after me. I saw a hole in the ground, and I dropped off the mare's neck into it, whilst she continued to follow the mare, which she caught, and gored so that it died. Then she returned and began to smell and root about on the ground looking for me. She examined the ground minutely and squealed, and I bit on my finger and wept and thought of my father. At last she went away, and I remained in the hole for some time, prisoned because of my fear. Then I returned, but I had not made the canal or collected the men or anything! I said, 'W'Allāh, I will not go,' for I was frightened of her. W'Allāh, this is my tale."

Wild duck, geese, snipe, partridge, and teal are lawful food. Religion demands that their throats must be cut after they have been shot. Although wild boars are plentiful, the Marsh Arab, true to his Mohammadan faith, hunts them only for sport. He refuses to touch them. Birds are sometimes trapped. A duck trap (*dōsha*) and a snare (*nōsha*) made like a double sieve (used for catching gazelle or fish) are used.

Pelicans may be shot for sport, although the Marsh Arab rarely wastes precious cartridges on a wily bird, which always flies at a considerable height and when on open water never allows the hunter to approach within range. The stork (*Ḥajjī Laqlaq*) is considered a sacred bird since it is believed to make an annual pilgrimage to Mecca.

According to local report, the iron fish-spear (*fāliḥ*) is sometimes used for killing a partridge when the bird is sitting. The hunter moves round and round the bird, closing in gradually, a maneuver that seems to daze it. I have seen Shammar tribesmen of northern Iraq use the same technique when shooting bustard.

Reptiles and amphibians are rare (see Schmidt, 1939), but the many varieties of fish found within the marshes have been the backstay of a Marsh Arab fishing industry for many centuries.

In water channels and rivers the natives usually fish with a net (*shabbaka*), which varies in size according to the width of the river

or water channel for which it is intended. Some of these nets stretch nearly across the whole width of the Tigris River. Weighted with lead, they use as floats *karabs* (the woody base of a palm frond). After being hand-netted, the mesh is toughened by immersion in boiling lime (*nūra*).

The net is paid out by a man standing in a *mashhūf*, while his assistant rows or paddles across the stream. After the last catch has been hauled in, the net is hung up to dry.

A second type of net, the *selliyya*, small and circular, is thrown outward by the fisherman with a dexterous movement of the wrist.

The fish-spear is used in shallow water, where the water weed, both subaqueous and on the surface renders the nets useless. Fish-spearing is usually done at night, a moonless night being preferred, although it sometimes takes place by day in clear and shallow water. At night, flares made of burning reeds and rushes lure the fish to the surface. As soon as the dazzled fish has risen high enough, it is speared by the fisherman who, weapon poised in his hand, stands alert on the "neck" (*'anaq*) of the *chalabiyya*. The spear is shaped like a long toasting-fork with prongs of varying length, each tipped by a barb (Fig. 11). The three-pronged spear is called *abū thalātha* or *thlūthiyya*, the five-pronged, *abū khamṣa* or *khumēsiyya*. In both, the longest prong is the center spear, the heart (*lebba*). In the five-pronged spear two short prongs are fitted to the shaft between the *lebba* and the side prongs. The torch is held by a man sitting in the middle of the boat, with a supply of fuel beside him. As the flare (*mash'al*) burns low, he takes another bundle of reeds and lights it from that which is dying down.

In order to bring the fish to the surface in deep water, a drug, digitalis (*zahar*), or *rubyān* (marigold seed?), which stupefies but does not injure the fish, is scattered on the surface.

Fishing by line and hook (for the latter the 'Irāqī Arabic word *sheṣṣ* is used) takes place only in open water, free from weed. The fish-hook (Fig. 11) resembles exactly those excavated at Jemdet Nasr (cf. Field, 1926).

It is probable that dried fish have been exported from the marshes since the earliest settlements were established there. The so-called "Tigris salmon" (*bizz*) is so large that a good specimen, when placed on the back of a small horse or donkey, will almost touch the ground on either side. It seldom is found in shallow water, but remains in the Tigris, Chahalā, or larger waterways. Local names of other fish are *bunniyya*, *shabbūt*, *shilich* (*shilij*), *ṣabra*, *himriyya*, *'aqad*

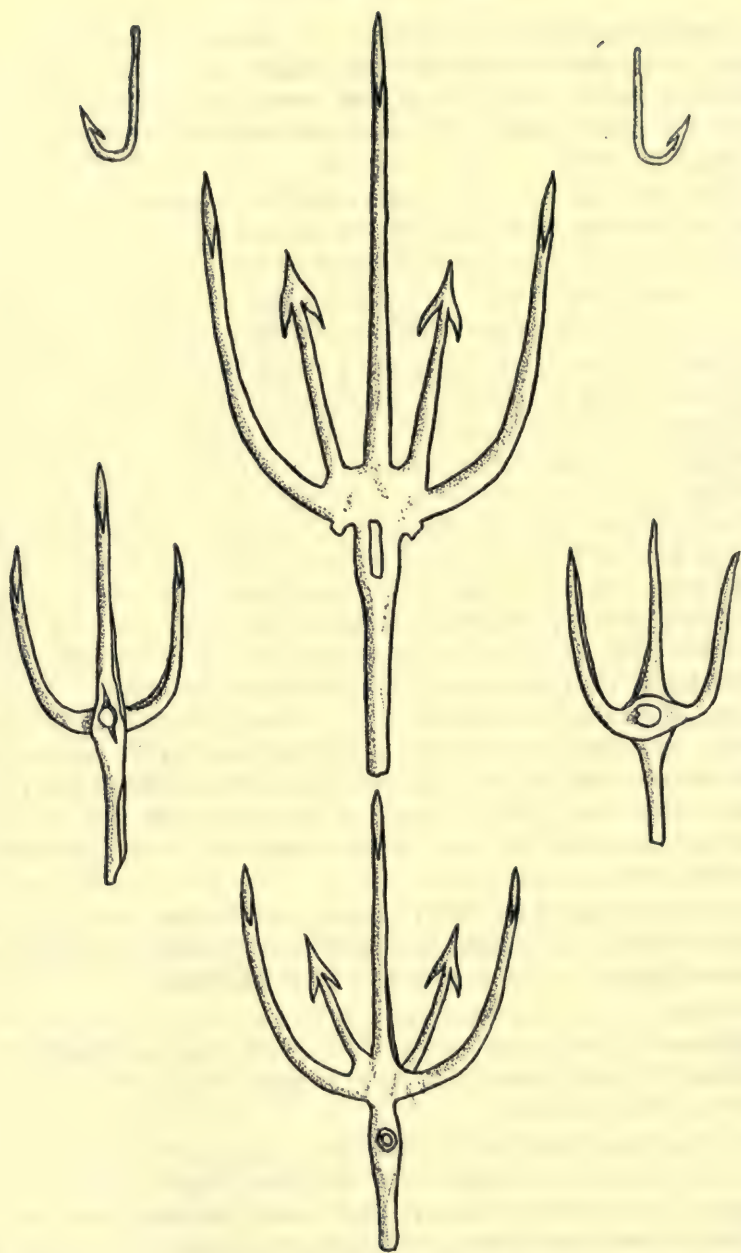


FIG. 11. Iron spear-points and fish-hooks used by Āl bu Muḥammad fishermen.

('jed; this is also called the *qaṭān* or *qaṭān* in the marshes but in Baṣra *barzan* and in Baghdād *dhikr*), *jerrīyya* (pl. *jerrī*), *aktūna*, *nabbāsh*, and *abū az-zummēr*. The local name for the *bizz* mentioned above is 'anza, or *jaṣṣāna*; the latter word is also used in Baṣra. The fish called *ṣubūr* in the marshes is known in Baghdād as *Abū suwaif*.

TRANSPORTATION

The sole method of transportation is by means of the waterways. The sailing ship, barge, and raft, which form the principal river craft, seldom penetrate into the marshes.

The largest boat (*bargash mirḥal*) is used mainly for exporting reed mats, but one often sees a whole family with its dismantled reed hut, reed mats, furniture, cooking pots, fowl, animals, rice, and flour mills, being transported to another village on one of these large, shallow-draught boats. A smaller boat of the same type is called *bargash*. Sometimes two of these boats are lashed together to carry a stack of giant reeds (*chāya māl bardī*).

Occasionally there appears in the marshes another type of boat (*dāneq*), which differs little from the *bargash* except that it has sails.

Next in size to these is the *ṭarrāda*, which will seat from ten to twelve persons. It is decorated on the interior by a studding of large, round-headed nails nearly an inch in diameter, called *girṣa*. The bottom of the *ṭarrāda* is often furnished with a removable flooring upon which mats or mattresses can be spread, while round cushions are placed against the arched crosspieces that span the craft. These crosspieces cannot be used as seats; they are back supports, for the passenger must sit on the floor of the boat if he is not to disturb the equilibrium. Such refinements as mattresses and cushions are, as a rule, only for people of importance or guests; the marshman is content to sit upon strewn rushes.

The generic term for the shallow, wide boat used in the marshes is *mashhūf* (Pls. 141-144). It is of a simple design, carvel-built, with inner ribs curving up from a center piece or backbone. This center piece ends in a long beak called the 'anaq, which serves to push a way through rushes and reeds in the swamp. The boat is pitched on the exterior and around the edges of the interior, the pitch being applied by hand with a rag and afterwards pressed smooth with a roller (Pl. 143, Fig. 2).

The smallest craft (*chalabiyya*) can hold two or three persons and is used for fishing. In the Muntafiq area this little boat is called *zā'ima chulēka*.

The usual method of progress is by means of a paddle (*gharrāfa*) in the stern, while a man in the prow punts with a pole (*mardī*), which is usually made from a stout reed although cane (*ganā*) imported from India is preferred because of its superior strength. The handle of the pole is finished with a knob of bitumen. The paddlers are not a necessity, for a skilled puntsman wielding the pole with strength and swiftness can propel the boat alone.

Several of the great sheikhs prefer a large boat (*balam*), built and imported from al-Baṣra; Sheikh Fāliḥ has a teak *balam*, which cost thirty pounds sterling (about \$150 at par). Two men scull in the prow of the boat; the oars (*mījdāf*) have pear-shaped or square blades and each oar is tied to the rowlock (*shaubak*), which consists of a notched piece of wood in a socket of painted wood faced with brass. The passengers sit in the middle of the boat on a mattress with cushions, and four men sit at the stern paddling, first all on one side and then all on the other. The last paddler steers the boat.

There appeared to be little difference between the oar and the paddle. It is interesting to note that the extremely primitive sweeps used on rafts supported by inflated skins (*keleks*) are called *majādīf*.

The most primitive form of water transport consists of a floating bundle of reeds (Pl. 145, Fig. 1), a means of progress probably used by the earliest and most primitive inhabitants of the marshes. A marshman will propel himself on one of these bundles as easily as in a *mashḥūf*.

When going against the stream, the punter, with one or two others if the craft is heavy, springs to land with a tow rope (*shārūfa*) and trots along the bank (*chīffa*) at a steady pace, leaping any small ditch and wading any irrigation canal that comes in his way. I have seen men at Qal'at Sālih towing a sailing ship (*maḥēla*) and taking astonishingly wide leaps, one after the other. They often run naked, and their fine, muscular bodies indicate excellent health.

DWELLINGS

Villages are scattered throughout the marshes (Pl. 57, Fig. 1; Pls. 58, 59). Passing these villages in a *mashḥūf*, one sees the inhabitants at their daily tasks, for they live outside and perform most of the household work, such as cooking and baking and weaving, in the open air. The waterway is the sole link with the outside world; peddlers who make the circuit of the marsh villages bring news as well as bales of cloth and cotton, spices, tea and coffee, and the other wares that come from towns like al-'Amāra, al-Nāṣiriya, al-Baṣra

and Qal'at Sālih. The light-colored, shaggy watchdogs bound along the bank for a little distance, barking furiously; children, naked or half-naked, gaze and run to look, while the women occasionally glance up from their milling, winnowing, or baking to shout a friendly greeting to the men who pole the boat.

The larger reed villages, built on dry ground, may consist of several hundred huts. In the heart of the swamp, however, one comes upon groups of reed huts built upon platforms of reeds and rushes, with mud trodden down firmly, and covered over by layers of reeds and reed mats. These islands are called *chibā'ish*.¹ To move from house to house, a man must wade, swim, or go in a boat, although here and there huts are grouped on one platform or connected by a bridge of reeds. In flood time, more rushes and reed mats are piled on so as to bring the dwelling above the water.

The general term for a reed hut is *ṣarīfa*, but there are many varieties. In the marshes proper the most popular type of living- and guest-hut is the *kūkh*, a hut with a rounded roof. It is only in recent years that the wealthier marsh sheikhs have replaced the big reed reception house (*maḍīf*, invariably pronounced *muḍīf*; see Pls. 52, 53) by a brick-built *dīwāniyya* (Pl. 50, Fig. 1), and even now the *maḍīf* serves as a guest room for town visitors and is used for the daily friendly gatherings. In summer the reed hut is infinitely cooler than a mud or brick construction, for the latticework of the lower wall admits the evening breeze and the fresh night air, whereas bricks and mud retain the heat of the sun even at night.

In the *maḍīf*, huge ribs formed of great bundles of reeds (*shebāb*) rise symmetrically to form the perfect arch of the roof (Pl. 53). These giant reeds (*gaṣab*) are hollow, jointed, and extremely strong. Before they are inserted into the ground at regular intervals, like a colonnade, facing each other, they are bound into firm bundles as much as two feet thick, by means of ropes of twisted rushes (Pl. 54). The plumy heads are then bent over and cut off and the ends of the opposite bundle interwoven with these so deftly that the joint is hardly visible. The two bundles thus united now form an arch. Occasionally the arch receives further support from vertical bundles placed on and not in the earth and down the middle of the hut. These, curved or straight, are called *bāqāt*. Reeds bound together in a pointed bundle may be called *shāsha* (Fig. 13).

¹ There is a village of some size called Chibā'ish, built entirely on these platforms. The root *kbsh* is found in several Semitic languages (*kbs* in Akkadian and Arabic, *kbsh* in Hebrew and Aramaic) with the meaning "to tread down" or "stamp under foot," and is extremely common in Mandaean magical documents where devils and enemies are "trodden down" or "subdued."

The next step in the erection of the hut is to bind transverse bundles of reeds to the arches, the lowest being about two feet from the ground (Pl. 54). Each bundle (*haṭar*) is formed of reeds thinner than the *shebāb*. Next, a light latticework of reeds, covered in winter, is inserted between the lowest *haṭar* (pl. *aḥṭār*) and the ground to admit air and coolness in summer. The framework is then overlaid with reed mats (*bawārī*), one overlapping the next. There are often two layers of these mats or a thatching of reeds above the mats. One *maḍīf* which we visited (Pl. 52) was covered over entirely by a single *bāriya* woven in one piece, above which were a hundred and fifty overlapping reed mats of smaller size. Reed mats are placed along the sides of the hut and the two end walls are constructed of erect bundles of reeds covered with mats and strengthened by *aḥṭār*. There is often an entrance at both ends consisting usually of a square opening without a door or other covering.

Most living-huts are of the *kūkh* pattern described above, but they are not so carefully and elaborately built. The end walls are often bundles of reeds with their feathery tops still uncut, propped against the structure or bound together by reed ropes or by *aḥṭār*, while the entrance may be merely an aperture in these reeds. The entrance is supposed to face Mecca; actually, entrances face all directions.

A second type of hut is rarer in the marshes, except on the Jabal Hamrīn side and approaching Baṣra. As it is the usual type in Khuzistān and not uncommonly develops into a mud-wall hut with a reed or thatched roof, this type, the *jemālī*, may be regarded as an embryo house—a reed hut in transition. The smaller dwellings are easily uprooted, and one sees mats and *shebāb* and *aḥṭār* all piled up on a *bargash* ready to be re-erected elsewhere.

The framework of the *jemālī* consists of two strong sheaves of stout reeds, bound so that they can be divided into a fork at the top. These are placed apart at the distance of the planned length of the hut. The feathered ends of the reeds may be cut off or not. Into the forks, the trunk of a palm tree, or a pole, or sometimes even an iron pipe is dropped to form the ridge-pole (*jīsr* or *hardī*) of the structure. Occasionally the builder uses forked poles to support the ridge-pole instead of the two bundles of reeds. The ridge-pole projects at either end of the building when it is complete. Matting placed over this ridge-pole is stretched to meet two side walls of reed mats strengthened by upright bundles of reeds, these side walls being much lower than the end walls. Sometimes the structure is

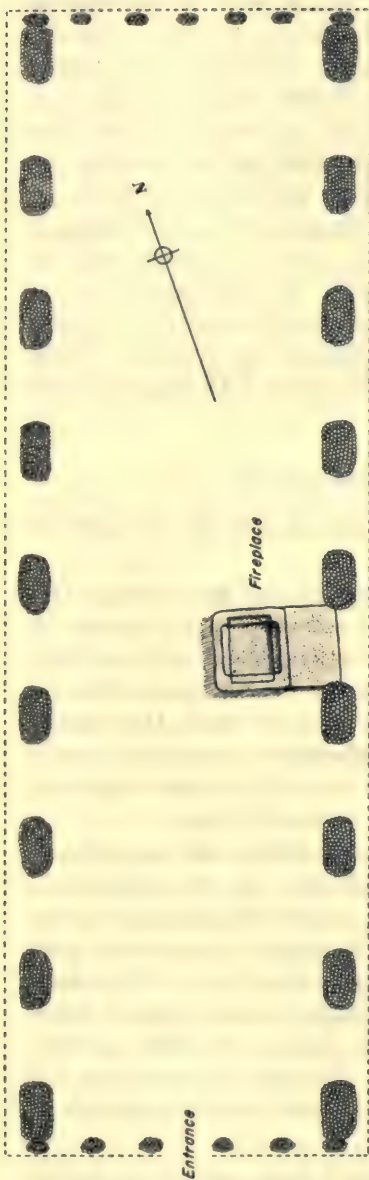


FIG. 12. Ground plan of Al bu Muhammad council house.

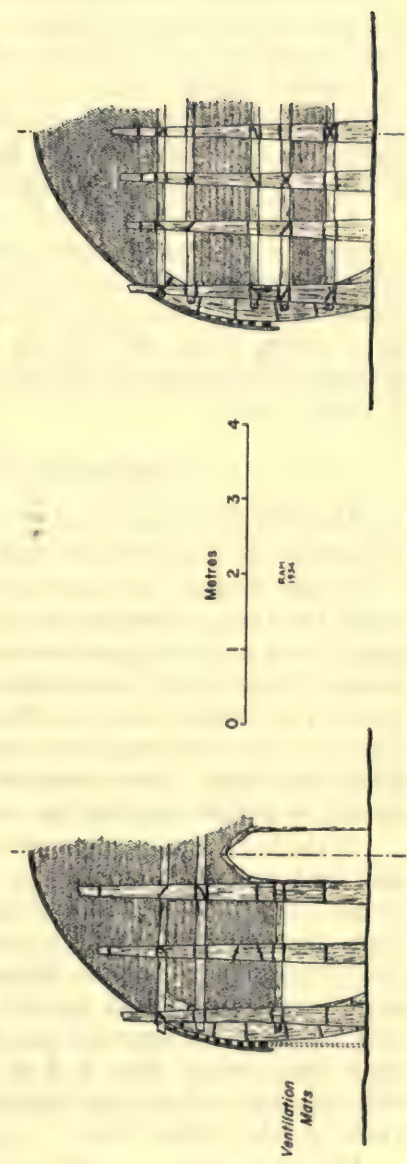


FIG. 13. North and south elevations of Al bu Muhammad council house.

daubed over with mud; sometimes the side walls are replaced by *libin* (mud mixed with chopped reeds or straw) and the matting on the roof is further strengthened by a thatching of reeds. In this case, the result is not unlike the cob cottages of Devon and Cornwall in England, except that the walls are thinner and the thatching lighter in character. The *jemālī*, however, is rare in the marshes except as a shelter for cattle; its sharply sloping roof suggests an origin in a higher country, where snowfalls might be expected.

A third type of hut, *kishik*, usually situated on a river bank, is square and often of extreme grace, with interior dividing walls of latticework and small arches, all of reeds. It often has a portico (*sōbāt*) of reeds. No other type of hut has interior walls. It is used as a sitting room and for the entertainment of friends. These pleasure huts are built for sheikhs or other people with leisure enough to enjoy them.

DOMESTIC WORK AND APPLIANCES

The living huts of the Āl bu Muḥammad and the Āl Suwāʿad are nearly all of the *kūkh* pattern.

Poorer families have not the luxury of two reed huts. One small reed hut, sometimes so light and temporary that it can be taken down and re-erected in a day, shelters man and wife and their *furēkh* ("little brood"), as children are termed in affectionate diminutive. The smaller animals often share the hut with the family. The hen sits on her eggs in a round earthenware receptacle (*mōgīf*) filled with ashes. Sometimes the *mōgīf* has a lip in which grain is placed, so that a brooding hen can feed without rising.

In the hut of one young sheikh whom I visited, a calf was tethered and fowl strolled in and out as they wished. At the farther end (*yōṣar*) of the hut stood a reed platform (*sarīr*) with trusses of stout reeds about three feet high for legs. This couch was covered with brightly colored mattresses. Although her husband was an important sheikh, my hostess used this hut as a sitting room, dressing room, and kitchen; her servants and women slaves (for most sheikhs keep black slaves) slept in it at night. She shared a sleeping hut with her husband and children and such fowl or other animals as cared to take shelter there.

Women and men usually are separated from each other during the day. No woman is veiled and there is no formal objection to a man who sits or talks with women. Whenever their work lies together, there is friendly intercourse between the two sexes.

Women, however, are not allowed to eat with the men, nor do they sit with them in the *maḏīf*.

Piles of mattresses and pillows, often covered with silk, are the pride of a prosperous sheikh's wife, or wives. Round, silk-covered bolsters, protected about the center by a cotton wrapping and edged with Manchester lace, serve as pillows by night and reclining cushions in the hut by day. Such cotton covers or even tablecloths—the latter used only when town guests are present—do not receive very frequent washings.

In places where it is difficult to get soap, which is imported from towns, or where the housewife is very poor, a dried and powdered saponaceous herb (*shnān*) is used for washing. Often soap is not used. The woman thumps the wet garments on a stone, rinsing them several times over in the muddy water at the river brim and drying them in the sun.

Around the sides of a well-furnished reed hut stand tall clay jars, ranging in height from about one to six feet, for the storing of grain. These tall clay bins, received by the owner in lieu of wages, are called *ṣudūd*; the smaller sizes are *ṣudayyid*. The largest *ṣadd* is termed the *minkhal*. The mouth of the salt jar (*wāwī*) is stopped with clay, but there is a hole in the sloping shoulder so that the housewife's hand can slip in and grasp some of the contents. A wide-mouthed jar (*kōz*) of porous clay with a rounded bottom contains the drinking water and is usually set in a high wooden stand at the door of the reed hut so that air may circulate around the wet surface and cool the water. A pan, also porous, is set below to catch the water which percolates through the *kōz*. The *shurba*, a pitcher with a handle, is placed near the receiving pan on the ground.

Water is brought from the river by a woman or girl; I have never seen a man condescend to this task. The *miskhana*, a tall, graceful copper jug with a long neck and a handle, is used for dipping up the river water. The water carrier stoops to fill her *miskhana*, sometimes wading in to get unmuddied water, and sets her pot on her shoulder or head for the return journey. In summer, surface water becomes hot, and pots are let down into deep, cool water, called *mai al-'arūs*, "bride's water." Although bilharzia is a common disease, water for drinking is not boiled.

A large covered basket (*sebt*) is also used for storing objects, and for general household purposes there are the *ṭabga* and the *guffa*, bowl-shaped baskets of shallow and deep make respectively. Some of these baskets are homemade, but many of the colored baskets are

brought from Karbalā and al-Najaf when some member of the family goes there on pilgrimage, or they are bought from peddlers who travel by boat from village to village (see Fulanain). Clothes are hung on a *teltela*, a rail of bound reeds secured to two of the strong reed bundles that support the roof.

Even a sheikh's wife has little leisure, for she with the help of her maids must perform all the household tasks. These include milling, bread-making, cooking, butter-making, the preparation of curds (*rōba*) and dung cakes (*muṭṭal*), milking, obtaining water, laundry, collecting pot herbs or simples, and finally, sewing, spinning (with a distaff), weaving, dyeing, and basket-making.

The housewife cooks her meat in tinned copper cooking pots. These are obtained in the copper bazaars of the towns and are not a local product. The cooking hearth (Pl. 66) is usually on the outside of the hut¹ and consists of three fire-blackened bricks (*manāṣib*) upon which she sets her pot, building up the dung cakes and reed fuel between them. The dung cakes are made from buffalo dung (*sarjīn*) mixed with chopped straw and worked into flat cakes (*muṭṭal*) about the size of small pancakes but thicker. They are dried by propping them one against the other in pairs on the ground in the sun or by placing them along the ledge afforded by the *aḥṭār*, the horizontal bundles of reeds on the houses. When dried, these dung cakes are stacked together and the top of the heap protected from rain by a clay cap (*gubba māl muṭṭal*). Dung for fuel is also formed into balls (*jella*), but these are little used in the marshes. The common Baghdādī word for the flat dung cakes is *bartōkh*. Another form of fuel for domestic purposes is made by the Ṣubba, who have a process of wetting reeds with water and baking them in a kiln into a hard cake (*rubbākh*) that burns without smoke.

The diet of the Marsh Arab is simple. The staple foods are rice and bread made of rice or wheaten flour. Sour butter, curds, and a rough cheese also form part of the daily food.

Chicken or any other kind of meat may be cooked with boiled rice and mutton fat or melted butter. Mutton, kid, or beef is, however, a luxury rather than a necessity. Chickens can be procured for the equivalent of ten cents. Fish, fresh or dried, and eggs are used as substitutes by the poorer people. For festal occasions a lamb or sheep is killed, and a guest is offered many delicacies, such as *hamud-ḥelū*, a stew in which raisins and dried apricots have been cooked with the meat; *pilau*, rice, cooked in butter or mutton

¹ Rice bread, however, is often made indoors (see p. 388).

fat, with meat or chicken, raisins, almonds, and fried onions; and *muḥallabī*, a dish of rice flour boiled slowly in sweetened milk, flavored with rose water and served cold.

Fresh fish are cooked in fat with onions and herbs, or are split open, propped up by reeds near a hot fire of reeds to grill in their own fat, and finally laid in the hot ashes for a final browning. Fish thus prepared are said to be *mashgūf*. Dried fish generally taste somewhat tainted, since the curing is crudely done. The process consists of splitting open the fish immediately after they are caught, sprinkling them with salt, and finally tying them to a rope to dry in the sun and wind.

Wild herbs are utilized, both raw and cooked. The white heart of a thick rush (*agēl*) is eaten raw and considered a delicacy. A plant called *ḥalba* is used as a vegetable. A pink flowering marsh plant (*gaṭā*) is put into a pan with a little salt and water and eaten as a relish with bread. The yellow fluff from the flower of the bul-rush (*bardī*) is made into a sweetmeat (*khurrēt*) in the following manner. Water is boiled in a pot, and a cloth, upon which the yellow fluff and sugar are placed, is laid above the boiling water. The cover of the pot is then clayed in so as to prevent steam from escaping. When the *khurrēt* and sugar, or date syrup (*dibis*), have been steamed for an hour or two, they harden into a solid, brittle cake about the consistency of sulphur and not unlike it in appearance. This is eaten as bread and is made only in the marshes, though it is sent to the markets of all big 'Irāqī towns, where it is greatly appreciated.

"Thorn-grapes" (*inab māl shōk*) are eaten and the leaves of the *arjējil*, like many other plants, such as cress (*rishād*), serve as salad. The women never have far to go in search of some edible herb, plant, or root wherewith to flavor their dish or add to their menu.

Rice flour is milled by the women. The rice is husked and then pounded in a tall, wooden receptacle (*jāwan*) hollowed out for only half its length, the solid part acting as base. While it is pounded, one woman, or more often two, perform the task to a rhythmic cry of "*Ḥai ḥēya! Ḥēya Ḥū!*" (Pl. 66). The instrument (*mijenna*) that is used is not unlike a croquet mallet but longer, the hammer end being uppermost. When the rice has been winnowed by tossing it in a shallow basket, the wind carrying off the light husks, it is ground in a hand mill (*mijrisha*) made by the women. The round grinder (*tag*) is formed of clay on a wooden core (Pl. 65, Fig. 1). First sun-dried, it is subsequently baked to the requisite hardness by being covered with a heap of red-hot buffalo-dung cakes. Both

upper and lower *tāg* are corrugated, the instrument used for making the corrugations being often the household *mess*, a flat copper spoon with seven holes. The upper *tāg* is faced with roughened pitch. Each *tāg* has a round hole in the center fitted with an iron socket, called the eye (*‘ain*), through which passes the connecting axle (*gaṭab*). The handle is simply a short piece of wood stuck into the upper *tāg*.

Rice bread is often baked in the house over a round, earthen fire pan (*mangala*) or over a fire hearth in pancake-like loaves. It is of two kinds: the *sīḥa* (literally, "bread of pilgrimage") and the *rīṣā'*, the former being somewhat thicker than the latter. When a woman makes *rīṣā'* she takes a copper, tin-plated basin (*tāsa*), and makes a paste of rice flour, salt, and water, just thin enough to pour. Upon the hot surface of an iron pan (*tāwa*) inverted over the fire embers, she pours the dough, flattening the loaf with her hand until it is round and of equal thickness. Then she covers it with a copper tray, also tinned. In a moment or two the bread is ready. *Sīḥa*, which is prepared in the same fashion, is crispier.

Wheat bread is prepared in a different manner (Pl. 67). Flour, salt, and water are worked into a dough, which is tossed from palm to palm until it is flat and round. The thin flap of bread is then wet with a little water and slapped with a dexterous movement against the smooth interior of the *tannūr*, a large earthenware oven shaped like an Iranian water cooler (*ḥubb*), its base sunk into the ground and set in rough mud mixed with straw. The round, flat loaves adhere to the sides of the oven, which is heated by a fire of reeds. Bread is not called *khubz* as elsewhere in 'Irāq, but *‘aish* (=Life) as in Egypt.

Although coffee is the favorite beverage of the Marsh Arab, tea is often served in small, waisted glasses (*istikān*) half filled with sugar. Loaf sugar made from sugar cane is preferred. Coffee, on the other hand, is bitter and black, and aromatic with cardamom. Milk is never added to either tea or coffee; according to the Arabs this is a barbarism practiced only by Europeans.

One of the principal features of the interior of the hut is the coffee hearth, given the Turkish appellation, *ōjāgh*; in a private hut it is called a *mōgīf*. It is a square on the ground of the hut, enclosed by a low, raised, rounded, mud ledge, not entirely surrounding the square but leaving an aperture of about six inches (Fig. 14 and Pl. 63, Fig. 2). On this hearth, fire is kindled, usually of dung cakes, started by burning reeds or thorn. Firetongs (*mingāsh*) are used to arrange

the fuel. By this hearth sits the coffee-maker, for no amateur hand is allowed to meddle with the solemn business of coffee-brewing. The beans, which should be of a jade color, are first roasted on the *mughlā*, a flat pan with a long handle often decorated with brass knobs. When the beans are roasted brown, not black, they are placed in a brass mortar (*hāwan*). The chiming of the pestle is a signal for passers-by to stroll in and squat against the reed ribs of the hut. The coffee beans must be pounded coarse.

Ready on the hearth is the big, long-beaked pot¹ (*gumgum*) containing hot water. The coffee-maker does not use fresh hot water for his brew, but *shurba*, that is to say, colored coffee water from

FIREPLACE

PLATFORM



FIG. 14. Cross section of fireplace in Al bu Muhammad council house.

previous brewings contained in a smaller pot of the same shape, the *telgāma*. This is poured on the coffee from a still smaller pot, the *della*. There are generally more than one of these smaller pots in the hot ashes, but only one *gumgum* and only one *telgāma*. While it is boiling the coffee should foam up three times, and three times be set aside to simmer. A little cooler water is sometimes added to settle the grounds, and a little cardamom seed to give the coffee an aromatic flavor. Palm fiber stuffed into the spout of the *della* filters the liquid as it comes out. A cloth (*bēz*) is used to hold the hot metal. The coffee-maker rises to go the round of the hut, beginning with the sheikh, holding the handleless cups, three and four at a time, in one hand and the *della* in the other. He pours a spoonful of coffee into the topmost cup and offers it to the sheikh, who swirls the coffee slowly round the cup several times before drinking. When he has swallowed the first minute draught, he receives a second quantity with the same procedure, and sometimes a third. To indicate that he needs no more, the sheikh shakes the cup slightly before handing it back. The principal guest is then offered the same cup, and the coffee-maker goes the round of the company collecting cups as they are empty and refilling but not washing them.

¹ For drawings of coffee-making utensils, see Field, 1935, Text-Fig. 36.

Every sheikh of standing has his own coffee-maker, who accompanies him if he goes away for any length of time. Coffee is the symbol of hospitality and to omit a man when coffee is being served is an insult that is only to be wiped out by blood. It is a common way of indicating to a man that his sister or near female relative is unchaste, and it is expected that the man to whom this silent hint is given will immediately go and cut the throat of the woman who has sullied his family honor.

ARTS AND HANDICRAFTS

Weaving of both cloth and reeds is one of the chief occupations in the marshes. Reed mats (*bawārī*) made in the marsh district are used extensively throughout 'Irāq and are even exported to Iran. They are simply made, with a technique that apparently has remained unchanged since very early times. A number of strong, pliable reeds (*bardī*) (see Pl. 69, Fig. 1), softened by immersion and split, are laid closely side by side on the ground, and the weaver interlaces a second set of split reeds laid at right angles across the first, starting in the middle and working first up and then down. The ends of the second set are then plaited into a third set, the weaver sitting on the part of the mat already completed. While he is working he keeps his hands and the reeds wet by means of water kept beside him in a bowl. When the mat has reached the size required he cuts off the ends, folds over the edges, rolls up the mat, and ties it with a rope (*banda*). The rough edges can be sewn with string or reeds by the women when the mat is purchased or used.

Cloth weaving, called *hāyicha*, is performed by men as well as women, the former being accounted the more skillful. The loom, which is primitive in type, may be erected either in the house or outside. The weaver stands before it in a hole in the ground, known as the *jūma*. The main framework of the loom, often of wood, in one case was of reed bundles (*shebāb*) stuck into the ground and bound together in the customary way with reeds (Pl. 60 and Pl. 61, Fig. 1). Four horizontal bundles of reeds, thinner than the *shebāb*, were called *mushharat*. Extending for some yards, the warp threads were fastened to a thick wooden peg (*bakra*). The names of the various parts of the loom were: the shuttle (*minhūch*); the batten (*gafl*); the comb (*mishṭ*), the teeth of which are set between two reeds called the *fechch*; the wired frame (*def'a*), which pressed the threads into the material; and the cloth beam (*noil*). A reed wheel for winding thread was called the *dūlāb*, and a reed bobbin, a *nāzūga*.

A simple device for skeining wool consisted of a stick bent until its ends overlapped, secured by thread so as to form a loop (Pl. 62, Fig. 2). This was called a *maṭwā*.

For their own use, the marsh tribes weave rugs of poor quality, saddle bags, and tenting from goats' or sheep's wool. While I did not see any woollen 'abā cloth woven in the marshes, in al-'Amāra and Qal'at Sālih the tribesmen place stakes in the ground at intervals for the required length of cloth and the man walks from end to end unwinding the wool from his tray of bobbins.

All silk comes from the markets of the big towns, and foreign artificial silks are rapidly supplanting the hand-woven silks that were formerly used for the 'abā's of the wealthier women or for the bride's *zibūn*. Artificial silk has become the principal stock of the silk merchants in the towns, for it is cheap, shiny, and brightly colored, all popular qualities.

The embroidery adorning the 'abā's, which are loose-sleeved coats worn by men and women alike, is done by the men and is called *kalabdūn*. The thick woollen winter 'abā' is called *khākhīyya* because of its brown earthy color (cf. Hind. *khākī*=dusty; dust-colored from Pers. *khāk*=dust); the middleweight 'abā' is a *jīsriyya*; the transparent woven summer 'abā' is a *bisht*. The metal thread tie-ups ornamented with "bobbles" of gold or silver thread are *gētān*, the metal thread edging is *chasbī*, and the metal oversewing of the seams is *maksur*. Women have metal embroidery on the sleeve of the 'abā' called *bakhkhiyyah*. The 'abā's are tailored by men, and they usually make the *zibūn*, a gown worn, in the case of men, over the ankle-long shirt (*dishdāsha*).

The use of cheap aniline dyes has now largely replaced vegetable, mineral, and animal dyes. Nevertheless some natural dyes are still used. Since these tribesmen are often color-blind, for red they use *zargā'*, which is obtained from copper sulphate. Curiously enough, for blue in varying shades they employ indigo, blue tattooing powder and tamarind (*tamr hindī*). For green, an infusion of willow leaves (*gharb*) is made. For orange and red, pomegranate juice (*dbāgh māl rummān*) mixed with powder of vitriol (*zāgh*) and indigo (*chuwīt*) is used. For yellow and brown, particularly for dyeing the light summer 'abā', they employ an infusion of *kubbān*, a curious water-weed with flesh-colored, transparent tubers that grow like fingers, five in a group. This weed has a bright yellow blossom and flowers freely in the months of April and May. For purple, *ṭahama* leaves are boiled down.

CLOTHING AND ORNAMENTATION

No women are veiled, not even those in the sheikh's household, unless they happen to go to a town, where they comply with town usages. When local townsmen or foreigners are present, women of the sheikh's family withdraw into some seclusion, but tribesmen, if they are of lower degree, can converse with them.

The usual form of hairdressing is a straight fringe over the forehead (*jidhdha*), with the rest of the hair plaited. Sometimes the plaits are looped up and fastened on the head; sometimes they hang down, their length increased by black threads plaited with the hair.

I had the privilege of helping with the morning toilet of a sheikh's wife who, although she had seven children, was still in her twenties and had a skin of which any European woman might be proud. Her complexion was fair and she scorned the use of powder or cosmetics. A black-skinned slave girl brought a long-spouted ewer (*ibrīq*) and a basin with a perforated cover (*lagaan*) upon which the soap was placed and set them before her mistress, who sat on the floor of the reed hut. The lady, having removed her headdresses and upper garment so that neck and arms were bare, washed herself with the water that the slave girl poured over her hands and dried herself with a towel brought by another Negro handmaiden. All the while a mirror was propped against a wooden box so that the lady might see herself. This wooden box was highly important, for it contained her wardrobe. Another box of the same kind, with a large lock, held her jewels and talismans. A fine comb of sandalwood was brought and she unplaited her black hair, which she wore parted, without the usual fringe. It was slightly reddened with *ḥinnā*.¹

Her hair rebraided, with two side locks combed forward so that they would appear beneath her headdress, the sheikh's wife took her black wimple (*fūṭa*), usually called *shēla* in the marshes, and, putting it well to the back of her head so that the top remained uncovered, she held it together with her teeth while covering her

¹ The green leaf (*Lawsonia* sp.) is dried, powdered, mixed with water, and applied to the hair as a paste. *Ḥinnā*, or henna, is usually mixed with *ṭīn khāwa*, a saponaceous earth called *gīl* by the Iranis. This earth, if placed with the pink petals of the *jūrī* rose (a rose used for making rose water) takes the perfume of the rose. The *ṭīn khāwa* imparts a gloss to the hair and lessens the dyeing quality of the henna, which is astringent and often stops the falling of hair. This refers to the real henna, not the so-called "Persian henna," which, mixed with a compound of indigo or some other dye, darkens the hair. See Hooper and Field, pp. 134-135, 192-193.

forehead with a black headband (*'aṣāba*). A long black turban (*kēsh*), which had previously been extended and smoothed out by her maids, was then folded round her head in a boat-shape. This done, she brought the ends of her *shēla*, wimple-wise, under her chin.

The lady's dress, which she had put on before completing her hairdressing, consisted of a slightly waisted *zibūn* and above that a transparent, wide-sleeved, black garment called a *hāshimī*. This had no fastening and could be slipped over the head. Above that again was the *'abā*.

When the headdress was arranged to her liking, ornaments (Pl. 73) were produced from the unlocked treasure box. Around her turban the lady draped a long, narrow, triangular slip of black silk about a meter in length, to each end of which were hooked two bands of jewelry called *'agāl*. This slip is called the *ḥabar*. The two bands of jewelry can be unhooked, fastened together, and used as a stiff collar (*lōq*) or used separately and worn on the wrists as bracelets (*manātish*, named from the pins that fasten the bracelets together). Next, she looped upon her turban a gold *gurdāla*, a two-strand and four-strand filigree chain with pendent "hands of 'Abbās," and filigree stars or flowers with ruby centers. The *gurdāla* is a favorite ornament, varied and rich in design and is, like the rest of the jewelry, the work of Ṣubba goldsmiths. The headdress was now further ornamented by two pieces of red silk braid (*nejūm*) about a yard in length, fastened so as to fall on either side of the face. To these were attached a little blue *zuwrijyā* to ward off the Evil Eye, three heavy, round, gold buttons (*gubāb*), and twenty-seven gold *lu'ba*, ornaments resembling Byzantine coins, but formed on a mold and pressed together in two halves. There was also *cheff al-baṭṭ*, an ornament in the shape of a webbed foot, of gold, crystal, and rubies surmounted by a gold crescent. The final touch was another protective blue button (*khqdrāma*) and a silken tassel of red and green.

About her neck the lady clasped several necklaces, including a wide collar of large turquoises. In addition to these she wore a long gold chain to which rows of gold coins were attached, called the *maksara*.

Marsh beauties do not wear the pearl and turquoise nose-stud (*warda*) so popular in the rest of 'Irāq, but they have the swinging nose ring (*khazzāma*) worn through one nostril by tribal and poorer women throughout the country. When rings are worn through each nostril, the left ring is called the *sha'a* and the right one the

zummām. My friend did not wear any of these, but she wore enormous earrings (*tarāchī*) of gold filigree set with pearls and rubies, and another pendent gold hook (*maṭreg*) in the helix. Around her ankles she fastened heavy gold anklets (*hijil*). Poorer women wear silver anklets.

At the end of her toilet the lady took up her small collyrium flask, into the top of which is screwed a pointed rod used to apply the black pigment to the eyelids. The proper way to apply kohl (*kuhl*) is to roll the eyelid and apply the pigment with the point of the rod to the inner side of the lid. This should be done at night, and the eyes washed in the morning. Enough of the pigment remains to give the desired effect; an extra touch is sometimes added. *Kuhl* is supposed to benefit the sight, but, as the phial is freely handed about from woman to woman, trachoma may often be transmitted by this means.

Kuhl is bought in lumps. Soaked in water for three months, it is then ground very fine and mixed with "clean" butter. A small brass mortar with a brass pestle (*ṣadd*) is used, one such being kept in the hut for pounding herbs, medicines, and henna. The best *kuhl*, called *ithmid*, comes from Mecca.

The young woman, like many others, had covered her two upper, second incisor teeth with a gold casing, a practice that usually results in the decay of the teeth.

Rings are worn on the fingers and sometimes on the toes. *Fetkha* is the word used for a toe ring, but it is also applied to a ring worn on the forefinger. A woman of standing has her own name or that of her husband engraved on a gold or silver ring (*muhr*=seal). A flat broad bracelet (*khōsa*), usually set with imitation or real turquoises and rubies, is worn on each wrist by most women.

Other types of jewelry worn by the women consist of glass bangles, called by one woman *ma'āḍad* and by two others, *majadiyya*; earrings of the type called *shaḍr*, with a complicated pattern of gold beads set on a solid gold background; a silver ring with inset turquoise, connected by a silver chain inset with turquoise to a bead bangle (*itmām*); a long pendant at the side of the head made of large amber and gold beads, a flat gold bead set with a turquoise (*khaḍ-rāma*), a large red bead (*zuwijiyya*), and a gold coin (*ghāzī*); a finger ring usually called *maḥbes*, worn by all except the poor women, who substitute silver, copper, and glass for the gold and precious stones. A brightly colored fringed kerchief (*cherghad*) is occasionally wound above the black headband covering the forehead.

Except for an occasional ring, signet, or watch chain, men wear no jewelry. Boys, however, often have a thick silver ring (*tōq*) about their necks, decorated by a turquoise set into the clasp or into the center.

SOCIAL ORGANIZATION

The marsh tribes, like the other tribes of 'Irāq, acknowledge the leadership of a sheikh, whose authority is subdivided among lesser sheikhs. These are, in fact, feudal communities. The tribesmen work for their sheikh and are paid in kind and not in money; they are also entitled to the protection, advice, and hospitality of the sheikh, who is their "father." Upon the arrival of a sheikh in a village, the inhabitants immediately come forward to kiss his hand and place it against their foreheads in token of respect and fealty. They must fight for him to death if there is need and take up his quarrels as he must take up their quarrels, if they have suffered serious wrong at the hands of a man of another tribe.

Intertribal disputes may lead to exceedingly vindictive and cruel treatment of one tribe by another. I was told that one hostile marsh tribe captured a boy, buried him up to his neck, put his eyes out and left him to die. He was rescued by a British political officer, but died soon after.

If murder has been committed, a tribe raided, a blood feud or a desperate quarrel begun, during which injury has been done by one tribe to another, the matter may be settled by handing over money, cattle, women, or a combination of all three. Compensation is agreed upon in conclave, usually through the offices of a mediating tribe.

The custom (*faṣl*) of handing over women to settle intertribal disputes is more common with the marsh tribes than elsewhere in 'Irāq. The *faṣl*-woman, often a child who has just reached puberty, is sent among the enemies of her tribe to bear children to a stranger and swallow the taunts of those who still cherish bitterness against her people. If she bears no child she may be sent back to her tribe to be exchanged for another girl. It is said that sometimes a *faṣl*-woman is returned to her people even after she has given birth to a son. In practice, however, the *faṣl*-woman is often the means of effecting a genuine reconciliation between two hostile tribes or sub-tribes. If the father of her children becomes fond of her, she may be allowed to see her people or they may be allowed to visit her. Thus, by degrees, relations of a friendly character become established between erstwhile enemies. The marsh tribesmen,

once honor (*sharaf*) has been satisfied, are able to forget a bitter quarrel and to attribute its cause to destiny (*naṣīb*).

In times of peace the tribesman often goes unarmed but for his *chumāgh*, a stick with a knotted or crooked end, useful for driving cattle or, if need be, for self-defense. He may sometimes carry a short mace with a round bitumen head called a *magwār* or, more rarely, a mace with a stone head, called a *ṣakhriyya*. More effective is the curved dagger (*khanjar*), sometimes kept in a decorated sheath which is stuck into the belt (see Field, 1935a, Fig. 37).

The sheikhs themselves are changing, inevitably, under conditions that bring them into constant relationship with towns, government officials, motion pictures, and modern inventions. Government schools flourish at al-'Amāra, Qal'at Sālih, Garmat 'Alī, and many other towns of the district. Until recently it was thought unmanly for a sheikh to be able to read or write; such unwarlike accomplishments were left to the *mullā*. Each sheikh had his *mullā*, who combined a number of offices in one person. He kept the sheikh's accounts, read and answered his letters, acted as his agent, dealt with visitors and politics, and enjoyed a good deal of power. The sheikh today, however, realizes that it is wise to send his sons to school, even if they leave him and go to Baghdād and run the risk of being converted into *effendiyya*, the generic term for all soft, clerkly, office-hunting townsmen.

The social life of the men centers around the guest hut (*maḍīf*). This hut seems to fulfill all the functions of a club, a coffeehouse, and a chapel. Within it, men assemble for coffee and conversation, for council, for mourning, and for prayer. The sheikh, or chief man of the village, sits in the place of honor. If a guest is present, he may sit at the sheikh's right hand or he may be given the place of importance. For such a person of substance or honor, mattresses or carpets and bolsters supplement reed mats placed along the sides of the interior. The common folk sit on the matting. The *maḍīf* is generally spoken of as "the sheikh's guest house."

The tribesmen consider themselves responsible for the welfare of a guest and his belongings. They become, however, expert thieves if a person unprotected by their laws of hospitality comes within their midst.

Since conversation is one of the main forms of mental recreation, scandal, often groundless, spreads rapidly in the villages. This may be the basis for the reputed low standard of sexual morality among the Marsh Arabs. Homosexuality apparently occurs to a certain

extent, but stringent tribal laws discourage such vice. Most of the scandal is directed against the women.

The natural avenger of family honor is the brother. If he overhears a slighting remark about his sister or a taunt in the *maḍīf* about her light behavior, or if the coffee-maker pointedly omits to hand him a cup when the coffee goes the rounds of the gossips in the guest hut, it is his duty to rise without a word, take his knife, go home, and cut his sister's throat, without inquiring as to the truth of the accusation. If the brother does not murder the girl, her father or some other male relative must do so. In a few cases, the husband of a slandered woman has applied to the local authorities to protect a wife in whose innocence he believes; but the protection is seldom of avail and the knife sooner or later finds its mark. Often the girl so brutally murdered is a mere child, and such a barbarous privilege—for the 'Irāqī courts pass nominal sentences in the case of tribal crimes of this type—becomes notoriously abused when property is involved. Moreover, as it is difficult to draw an exact line between townsmen and tribesmen, tribal law has invaded the towns as regards this form of crime. Owing to tribal analogies brutal murderers often escape with nominal sentences if they can but manufacture a plea, true or false, that morality was the cause of their deed.

The marriage customs are similar to those of other parts of 'Irāq. It is taken for granted that a girl shall be regarded as the betrothed of her paternal uncle's son. If her cousin already has his complement of wives or does not want her, she must still have his permission before marrying any other man. The penalty imposed by tribal custom for defiance of this rule, or for unchastity, is death. A man may keep a girl cousin waiting for years, neither marrying her himself nor suffering another suitor to take her, and a girl may remain single all her life because of the caprice of her cousin. Many are the tales of lovers who have braved this rule and met death in consequence. Where there is no paternal cousin, a girl may be given to her maternal cousin, to some more distant male relative, or even to a man of another family or tribe. Those of sheikh's blood take their chief wife from within their group, and race is esteemed more highly than wealth. Owing to these rules, one finds the families of the sheikhs inbred; yet on the whole they seem to possess health and good physique.

A dowry is paid by the bridegroom to a girl's father, who expends most of it on her clothing and jewelry. The townsman pays a certain sum down and promises a further sum should he divorce

his wife; but in the marshes the second sum is rarely stipulated. The jewelry is looked upon as insurance against divorce, and a divorced wife takes her jewelry with her. Hence the extreme richness and variety of the ornament which these marsh women wear; it is their protection against a dark future which may see them deserted, old, or supplanted by a rival.

When a woman is to be married she places upon herself as much of her jewelry as she can wear. First she is bathed and perfumed. A mixture of seeds, sandalwood, orris root, and *fin khāwa* made into a scented paste (*maḥlab* or *ḥalabī*) is applied to her hair. Her body must then be depilated by a woman called a *naṭṭāfa*, who sets to work to jerk out hairs one by one by means of a loop of thread and her teeth. Eyebrows are becomingly shaped by the same means. A powder (*zurēgh*) and pumice stone (*ṣakhara maḥliyya*) are also used, for no hair must remain on her body. The feet and hands are stained with henna. The bride, who is thought to be peculiarly susceptible to the Evil Eye and the Breath, is protected by a number of amulets, and great care is taken that the friend who adorns her shall be a fortunate person, a happy mother of children being preferred.

Rituals in connection with births were depicted for me by a young mother, who showed me how, in her pangs, she crouched and grasped the great reed rib of the hut, and pressed her forehead against the cool reeds, presenting her buttocks to the midwife (*jidda*), the reed hut crowded meanwhile by the women who had come to support her during the ordeal. With the mother in this crouching position the child is born, being taken by the midwife from behind. At the moment of severance the baby's navel is bound with a little sheep's wool. After the birth the mother's waist is bound tightly by the midwife and she is washed well with hot water. She is bathed again on the third, seventh, and tenth days. She is never left alone during or immediately after childbirth lest evil spirits harm her or the child. For a period of forty days the mother carries a knife about with her to ward off these mischievous beings, who fear any sharp or pointed instrument of steel or iron.

An infant is suckled without adherence to any time of feeding, and the child continues to suck long after it can walk. I have seen a marsh woman take the nipple from the mouth of a young baby to offer it to a child of four years, who beat her imperiously with his fist that he might have her breast. No sheikh's wife, however, suckles her child. She gives it as soon as it is born to a wet nurse (*dāya*), usually one of her own slaves or dependents. The foster

mother, with the suckling in her charge, remains constantly at her mistress's side, and the nurse's nipple is rarely out of the baby's mouth except when the child is asleep. The children of such a foster mother have a special relationship to the children of the real mother and are not allowed to intermarry with them. To get rid of her milk a woman bathes her breasts constantly with cold water and binds them tightly.

Divorces are lightly made. A man has but to say to his wife, three times before witnesses, "I divorce thee!" and she is no longer his wife. The sheikhs and wealthier men are prodigal in their matrimonial alliances. One sheikh boasted that he had married thirty-three women and said that his brother had married a hundred. However, modern times and restricted incomes are reducing the number of marriages. Moslem law permits a man only four wives at a time, but the system of divorce allows a man to marry for a short period and then send the girl back to her people. If she has borne him a child, she must leave it with him, for a child is paternal property.

There is, however, one permanent wife. She is generally a cousin who, kept on for reasons of property, family feeling, and possibly genuine affection, has weathered the storms and remained lady paramount. One such proud and elderly dame, of good birth and with the remains of considerable beauty, laughed without a trace of bitterness as she recounted her tactics with rivals. She was always polite to new arrivals, although they did not last long. To get rid of them she employed witchcraft (*sihr*) and spells, which, sooner or later, were effective.

RELIGION

The emotional extremes of the *Shī'a* doctrines are far more congenial to the Marsh Arab than the severer rationalism of the Sunnī faith. Religion sits lightly upon him, and his spiritual needs are satisfied as a rule by the visit of a divine (*mu'min*) for the two sacred months of *Muḥarram* and *Ramaḍān*. For this he is willing to pay, and if he has made a pilgrimage (*ziyāra*) to the holy cities of al-Najaf, Karbalā, al-Kādhimain, and Sāmarrā once during his lifetime he has a fair claim to being accounted a religious man.

It is not often that a marshman goes on pilgrimage to Mecca and becomes a *hajjī*. The *ziyāra* costs less and is a shorter journey than the *hajj* and the *Shī'a* Imāms lie nearer to the heart.

The burial customs and mourning rites are complex. In various parts of the marshes a long tumulus rises above the reeds of cultivated

areas. This is a reed vault (*biniyya*) covered with mud, which forms a temporary tomb. All who can pay the fees of transport and reburial, except very young children, are interred in such tombs for about a year and then, when a caravan of bodies happens to be setting out for al-Najaf, they are uncovered and carried to the holy city to be buried as close to the shrine as means allow. The higher the fee, the greater the proximity to the tomb of 'Alī. Rich men are transported to al-Najaf without this temporary burial (*amāna*), which is only a matter of expediency.

The belief is that only those worthy of interment in so holy a place are permitted by the Imām to reach their graves. Hence stories arise that on the way to al-Najaf a corpse has been known to change into a pig or a dog and run off into the desert. These legends are extremely useful to the corpse-caravan leaders who, if they find their convoy of corpses inconveniently large, dispose of them on the way, explaining shortages, if they are discovered, in the traditional manner.

The dead are washed with an infusion of the leaves of Christ's-thorn (*Zizyphus spina-christi* Willd.), called in the marshes *sidr* and in the rest of 'Irāq *nabqa* or *nabaq*. The body is then sprinkled with camphor (*kāfir*), wrapped in white muslin, and encased with reeds. Before the corpse is interred it must be placed on the ground three times, and it must be buried, if possible, before the sun sets. The instant that breath has left the body, the women begin to wail, beat their breasts, throw dust on their heads, and tear their garments so wildly that often their breasts are exposed. The men carry the body to the grave, the bearers often changing, as they go along, with fresh volunteers, for it is considered a pious and meritorious act to assist the dead man to his resting place.

Organized lamentation and breast-beating take place on the third and seventh days after death, but they are limited to women. The men gather together in the village guest hut or in another large hut, listen to the reading of a portion of holy writ by a *mu'min*, and say some *Fātiḥas*, but they sit in a quiet and orderly fashion. On the other hand, the female relatives, friends, and neighbors of the deceased person gather in and around the hut of the bereaved family, sitting closely together, sobbing and wailing in concert. At intervals, led by a professional mourner (*'addāda*), who excites them to hysterical grief by repeating praises of the deceased and poignant reflections upon the bereaved state of the mourners, they rise to their feet and jerk their bodies in a kind of dance, flinging

their unbound and unplaited locks from side to side with the movement of their heads (Pl. 76, Fig. 2). The more passionate mourners tear open their clothing and display their bodies, and all beat their breasts in unison to the *'addāda's* chant, punctuating the latter with the regular thud of their palms on their persons, their cries of woe, and the stamp of their feet. The kind of lamenting employed, ejaculatory verse, is simple:

Here is thy fishing spear idle!
Thy clothes lie piled together!
Thy children are fatherless!

Very often the community, village, or sheikh may have a local poet. The poets are highly respected and their compositions are usually sung. Ordinarily, they are expert impromptu versifiers. In Baghdād, however, I noticed that two female professional mourners, who functioned alternately, used verses scribbled in a notebook as their inspiration.

The death of the sons of 'Alī, Ḥasan and Ḥusain, is recognized annually by organized mourning ceremonies. This is fixed for the *'Ashūrā*, or first ten days of *Muḥarram*. It happened that in 1934 these ten days fell during our visit to the marshes. We had, therefore, been implored by the *Mutaṣarrif* of al-'Amāra to use the utmost caution, for, during these ten days, religious fervor, mounting day by day like a fever, reaches its climax on the tenth day of the month, when all is mourning and displays of grief, such as processions, breast beating, and flagellations; these and the pageantry of passion plays move the entire *Shī'a* population of 'Irāq to a frenzy of sorrow and religious fervor.

When we arrived at az-Zubair, black flags flew from the majority of the *maḍīfs* and *ṣarā'if*. Sounds of prayer and chanting, or loud sobbing as the days wore on, issued from riverside huts. Eventually it became impossible to ignore what was occupying the minds of our friendly hosts, and the marsh people would not shut us out from their griefs any more than they would have excluded us from their joys. Passing by Sheikh Khazal's *maḍīf* while the *mu'min* was leading the devotions, I was invited inside, although men and women ordinarily pray and weep separately. If women wish to listen to the *qirā'a*, as the reading and devotions are called, they crouch outside.

The next day I was invited to visit the large council chamber. The hour of prayer was at hand. Casting a questioning glance upon me the tribesmen asked me if I would like to "see how we weep for Ḥusain." This ceremony is conducted by the *mu'min*, who also

goes to neighboring villages. He called for the pulpit (*minbar*). An inverted wooden mortar (*hāwan*) was brought in and a cushion placed upon it. On this the divine seated himself, while his congregation, all men, sat on the ground against the sides of the reed hut and about the coffee hearth, where the coffee-maker had suspended his operations. The men loosened their black and white head-kerchiefs (*cheffiyya*), and brought the cloth crosswise over their mouths, concealing the lower portions of their faces. The ends of the cloth were thrown over their heads.

The *mu'min* began to recite in a chanting voice and whenever the name of the prophet or of 'Alī occurred the men joined in with a muttered, "Pray for him!" or "Pray for Allāh and for Muḥammad and for 'Alī," or a similar pious ejaculation. Soon the divine was reading from the *Ḥadīth* the tragic story of the battle of Karbalā. The chant was mostly on three notes, and in the more poignant passages he rose to the highest note. All present, their veiled heads bent low and their hands shading their eyes, lifted up their voices and wept aloud, "eh-ha, eh-ha, eh-ha!" while the women, clustered outside the door, joined in the sobbing.

Then the divine assumed his natural voice and began his simple sermon, the narrative of a thief who, caught in the act, had his right hand cut off and was then brought before the mild 'Alī, son-in-law of the Prophet. "What!" said 'Alī, "you are a Muslim and the son of a Muslim?" The thief admitted it. "How can a man be a believer and yet a thief?" The story ended with the repentance of the thief and the cure of his mutilated arm by 'Alī. Sentence by sentence as he proceeded, the *mu'min* interrupted himself to translate the literary Arabic into the colloquial Arabic of the marshes and to add his own moralizing comments. He ended his picture of 'Alī's clemency by chanting one of those mourning *Muḥarram* poems so dear to the *Shī'as*, his left hand placed at his left cheek. The men within and the women without wept copiously, and the *mu'min's* own voice became choked with emotion. Then, in a quieter monotone, he recited the *Fātiḥa*, the first short chapter of the *Qur'ān*, all the men joining in, hands placed palms upward, and the proceedings were at an end.

The same evening there was another service, which resembled that of the morning except that the company was bigger. The divine was eloquent as he read the story of the martyrdom of Ḥusain and his women and children, debarred from water to allay their thirst, transfixed by arrows, and cut off ruthlessly one by one.

Weeping is infectious, and our own eyes filled. This, the next day, inspired the *mu'min*, as we sat in an airy *kishik* by the river, to tell me a story. He said he was always ready to talk about matters of the faith. "Once upon a time, a man who was not a *Shī'a*, a stranger like yourself, chanced one day to be passing by when they were making wailing for Ḥusain. He came, he looked, he was moved, he shed a tear. When he died he went to *Jehannam*, for he had many faults, and there paid the penalty of his sins and uncleanness. But Allāh, seeing him, brought a basket of seed and, calling the prophet Mūsā [Moses], asked him, 'Seed for seed, what is this worth?' Mūsā could not answer the question; so He called another prophet and another, but none could answer Him. Then he asked Ḥusain, who replied: 'The man's sins were as countless as these seeds, but he wept one tear, and for that tear his sins shall be forgiven him.' Then the man was removed from hell and taken straightway into Paradise."

The *mu'mins*, who perform temporary duty during this period of mourning, receive a fee for their ministrations.

On the eve of the tenth day, Dr. Smeaton and I accompanied a sheikh's wife in a *mashhūf* to a *Sayyid's* house. He and his wife were townsfolk from Karbalā. She, feeling herself an exile in the reed country, had made a garden, with an arbor of vines. In this arbor carpets and cushions were spread and tea was served in small glasses as well as a brew from the leaves of the lemon tree (see Tol-kowsky, 1938). The moon was rising, and presently we heard girls' voices by the river, and their laughter.

"They have come!" said our hostess and, going into a little courtyard formed by a fence of reeds, we met a company of girls as they streamed in, irresponsibly gay and not at all, it appeared to us, in *Muḥarram* mood, although they were preparing a "mourning" for us. The proper dress for the girls who took part, our hostess said, should have been a white skirt above a black undergarment, but these marsh maids, who were between the ages of ten and fourteen, wore colors for the most part, and here and there one saw the glint of the gold or silver of their ornaments in the moonlight, or marked the swing of a nose-ring or the flash of an anklet. They formed a circle, and broke into a chant, slapping their breasts, dancing on their bare feet, and throwing their heads from side to side. They did not weep; indeed the whole performance seemed like a bursting forth of youthful high spirits. I asked the meaning of the shrill chant to the rhythm of which their bodies swayed, arms swung, and feet moved. It was:

Close round Ḥusain
And turn back his steed.

O that night had passed!
Weep noisily!

Presently they went out, to go laughing along the river bank and repeat their performance elsewhere.

The tenth morning no coffee was brewed, no bread baked. At dawn prayers and chanting, which had been continuing throughout the night, were still heard. It is considered pious to fast entirely but, as a concession, wheaten porridge (*harīsa*) mixed with sheep's butter (*dihn ḥurr*) is cooked overnight so that the hearth stones may remain cold until noon of the tenth day. Into this cereal a little meat, usually mutton, is shredded and a flavoring of sugar and cinnamon (*darsīn*) is added. *Harīsa*, like the hot cross bun of Christendom, has a semi-religious character and when, during *Ramaḍān* or times of pilgrimage, companies of pilgrims travel to the shrines of al-Najaf, Karbalā, al-Kādhimain, and Sāmarrā, they forswear all food but this.

We joined in the early devotions in the guest hut. The coffee hearth was cold, and a plate for offerings was put on the square ridge surrounding it. We duly cast in our contribution.

Later, we accompanied the sheikh a little farther upstream to see the "breast beating" there. As the *ṭarrāda* was poled along, past hamlet after hamlet, we heard sounds of sobbing and wailing from the huts. We banked by a wide, grassy place, where the village *maḍīf* was surrounded by a dense crowd. Here the sheikh landed, and the tribesmen immediately came to kiss his hand and raise it to their brows. A *quīrā'a* was going on within the hut, but mattresses and cushions were spread for us in the shade of some willows, from where we could view the *maḍīf* and the multitude about it. Behind the willows and the reed fence, women thronged, and their weeping and breast-thumping mingled with those of the crowd.

A rush of the crowd and the approach of large flags or banners swaying above it told us that a procession was on its way. The flags, torn and soiled, had evidently done duty many times, but they added to the color of the scene. One banner was white with a red border, a green crescent sewn to the center; another was red with a white border; another was all green. Above the heads of the crowd was the *tābūt*, the bier, upon which lay the supposed dead body of Ḥusain, covered by a magenta cloth. A wooden bench did

duty as the bier. Before it walked a group of breast-beaters, naked to the waist, led by a *rozakhūn*, as they term the man who starts the chants and incites the breast-beaters to vigor. When the procession was opposite us it halted; the leader turned to face the breast-beaters and began his chant, to which the men, in perfect time and rhythm, lifted their arms high and brought them down on their chests with great force, like human drums. Spectators thumped or patted their breasts as piety or decorum suggested. Then the procession passed on.

Behind the bier walked men in women's garments, impersonating the women of the martyrs. They addressed appeals, cries for mercy, and lamentations to the crowd. They wore black cloaks ('*abā's*), but their outer robes (*zibūns*) were of brilliant artificial silks, orange, green, purple, magenta, and red. Two pairs of small boys, in turbans, buttoned jackets, and full trousers, each pair led by a man who had tied a white cloth representing a halter round their necks, addressed the crowd in shrill emotionless voices: "'*Aṭash! 'Aṭash!*" (Thirst!) They were generously rouged with the red pigment that bazaar doctors smear on sore eyes.

Thirst, thirst!
O Husain, slave of God!
O Faṭuma the Flower!

they cried from time to time.

The crowd, fresh from the reading, conjured up the scene of the martyred family, shut off from the river and dying of thirst, of the child pierced with an arrow, lying on his father's breast, and the bloody shroud that the martyrs donned before going into the unequal fight. All wept with loud sobs, tears flowing unrestrainedly.

We followed the procession and crowd to a grassy field. Here a large ring was formed so as to give the passion players a stage in the middle. The "corpse" on its bier was set down in the center of the circle and actors clustered about it, pressing their heads to the bier in grief. The flags were planted in the arena. The breast-beaters once more faced their leader and a mighty breast-beating took place in answer to his inciting chant. Sweat poured over their brown torsos and their breasts were reddened by the force of the heavy blows. One man was led away half fainting, and later I heard that another had "purified himself" (*taṭahhar*) by succumbing to his injuries. It is considered highly meritorious if a man dies as a result of his austerities, and he is assured of reward in Paradise. Indeed, if a pious man dies during *Muḥarram* without neglecting

his mourning, he passes straightway into Paradise without a preliminary expiation of his sins.

The "women" of the holy family, the two pairs of boys, and a man with a kettle of water, who gave the performers a drink from time to time, perhaps acting the part of the distributor of the last few drops of water, paraded around the arena, addressing the crowd as before, while the boys kept up their mechanical cries. Finally, the "women" went among the crowd of women who stood apart from the men, sobbing and wailing, and their advent, recitations, and appeals provoked a crescendo of lamentations. The face coverings worn by the "women" to conceal their manly beards were of diverse colors, and their brilliant dresses and gold-braided 'abā's trailed in the dusty turf. The procession re-formed and returned to the praying-place (*maṣallā*), for the hut had lost for the time its hospitable character and had become a mosque.

At this point we accompanied the sheikh back to the *ṭarrāda* and were poled upstream on the homeward way. At noon, fires were lighted, the coffee-maker resumed his post, the weeping stopped, and normal life was resumed. At sunset the young sheikh sat in the *maḍīf* relaxed and smiling, while his Negro slaves and some of the tribesmen facing him began to sing love songs of the most carefree and cheerful type, snapping their fingers (*daqqa*) and beating one heel on the ground as they squatted opposite him (Pl. 76, Fig. 1). To this primitive form of castanets and drum, their male voices sang many attractive songs.

APPENDIX: NOTES ON THE DATE PALM IN IRAQ

BY

V. H. W. DOWSON¹

Description.—The date, or date palm, called *Nakl* in Iraq, is *Phoenix dactylifera* Linn. It is one of several somewhat similar species belonging to the genus *Phoenix*, which is characterized by the possession of a dense crown of generally hard and bristly, irregularly pinnate leaves, the lower pinnae usually reduced to spines, by small dioecious flowers in branched clusters, and by a terete one-seeded berry fruit with a hard and horny, oblong seed, terete and deeply grooved. The species *dactylifera* is distinguished from the other species of the genus by its usually large, edible fruit, erect, tall trunk of medium girth, robust and stout glaucous leaves with stiff pinnae in groups, a moderate number of spines, and dead leaf bases that are more vertical than horizontal. Of moderate hardness, it flourishes in a hot, dry climate, with much water at its roots. It is not known wild (see Pls. 220–224).

Distribution.—The date palm grows south of a line joining Ana, Abu Kemal, Tikrit, Kirkuk, and Khanaqin. This corresponds roughly to 35° N. Lat. Date palms thrive chiefly on the banks of the Tigris and Euphrates, their tributaries and effluents, and in the oases of Sitata, Ar Rahhaliya, Mandali, Badra, Jassan, and Az Zubair. Shatt al Arab, the river formed by the junction of the Tigris and Euphrates, is lined for the hundred miles of its length with date gardens, extending inland on either hand for an average distance of half a mile. Here, and near the junction of the three rivers, there are probably six million bearing palms. As many more probably surround most towns and villages in the remainder of the country.

Most gardens are privately owned, although some belong to the State and some are held by trustees of pious bequests.

Irrigation.—Date gardens are irrigated either by natural or artificial flow or by lift.

¹ Specialist on *Phoenix dactylifera* on the Kut-as-Sayyid Estate Limited, Basra, Iraq. These notes were sent from London on July 17, 1939. Since Mr. Dowson in 1939 published a provisional list of the varieties of dates of Iraq together with Arabic names, synonyms, and meanings, we have followed the simplified spellings. These notes were read by Dr. B. E. Dahlgren, Chief Curator Emeritus of Botany at Field Museum of Natural History.

Natural flow may be either one-way from a river or a spring, or it may be tidal. In the Shatt al Arab district, the tides bank up the fresh river water twice daily and drive it into the multitude of tiny channels that form a network throughout the gardens. It is an exception when the water floods the surface of the land; generally, at high tide the channels are only partially filled. At low tide, the channels act as drains.

Artificial channels are led off from a river at a high level and then are brought to lower levels, from which the water is led out on to the surface of the land. The water may or may not be dammed below the mouth of the channel. This type of irrigation is found chiefly in the Baquba and Middle Euphrates districts.

Lift irrigation is of three kinds: man, beast, or machine. The simplest method is by bucket or kerosene tin. Bucket irrigation is used in Basra for newly planted shoots. The kerosene tin differs from the bucket only in its long broomstick-like handle, which eliminates stooping.

A balanced water-joist (*dalw*) is used to irrigate small date gardens. It consists of a scoop of leather or a beaten-out kerosene tin fastened to a vertical pole. This, in turn, is attached to one end of a swinging beam, which is weighted at the other end and tied, between the center and the weighted end, to a cross pole supported on two adobe or palm-log pillars.

Donkeys, horses, mules, cattle, or camels are used in two ways: in the *karid* (or *tawi*), which is a water-hoist with a sloped ramp down which the animals walk, raising and lowering a bucket from and into a well; and in the *noria* (*naura*), which consists of buckets fixed to an endless chain. The chain hangs over a wheel, and reaches down into the well. As the wheel is turned, the buckets bring up water, turn over at the top, empty the water into a trough, and go back into the well. In a circle, about thirty feet in diameter, in the center of which is the *noria*, an animal draws behind it one end of a pole, the other end of which is attached to the gearing propelling the wheel (see Laufer, 1934).

Water can be raised about three feet with one tray, and twice that distance with four workers using two trays, one at the low level and one at the high. The *dalw* raises water about six feet, the *noria* up to about twenty feet, and the *karid* up to fifty or more.

In the past thirty years the owners of most date gardens which are under flow, and in which the summer lift is considerable (Baghdad district), have put in kerosene or Diesel oil engines and centrifugal

pumps. A few garden-owners in the Basra district have also installed pumps and engines to reinforce the tides.

Pollination.—The date palm is the only crop which is normally pollinated by hand. In April, the male inflorescences (*tal*) are cut from the male palms (*fahl* or *dakar*) just before the pollen (*liqah*) is ready to be shed. They are divided into about twenty small sprigs (*ilb*), one of which is inserted into each of the female inflorescences (*iaq*) on the female palms.

Propagation.—Since the seed of a palm, the result of cross-pollination, inherits characteristics not only from the female parent, but also from the male parent, a seedling date palm (*daqal*) is far more likely to differ from its mother than to resemble it. Thus, although date palms can be grown from seed (*fasm*, *nawwa*, or *fasa*), they are as a rule reproduced by offshoots, offsets, or suckers (*fark*, *fasl*, or *jabbar*). These sprout at ground level in the axils of the fronds (*saaf*) of young palms. Old palms only rarely produce offshoots. When the shoots are from five to ten years old, they are removed from their parents. They mature in succession and are removed one by one from the parent tree at intervals of several years.

Maturation.—The date palm begins to bear at from four to six years old, reaches maturity at from ten to twenty, and begins to decline at from thirty to forty years; it may live to be a hundred. It has a tendency to bear during alternate years.

The female flower consists of three carpels. After pollination, when the young fruit is known as *hababauk*, two carpels fall, and one remains and grows. From the time the green fruit reaches the size of a small marble until it changes color it is known in Iraq as *kimri* and in Morocco as *balah*. In June, July, or August, it turns yellow in some varieties and red in others, and, though still hard, is now edible. In this stage, it is known as *kalal* in Iraq, *busr* in Arabia, *saffar* in Morocco, and *maksar* or *akdar* in Egypt. When the fruit softens it is then known as *rutab* in Iraq or *naqqar* in Morocco. In this stage, the date is considered the most edible. When dried or cured, the fruit, known as *tamr* in Iraq and Morocco and *balah* in Egypt, keeps indefinitely.

Production.—The average annual yield of fruit harvested from a date palm in September and October is probably about fifty pounds. The total production is somewhat more than 250,000 long tons.

Uses.—The living palm provides shade for other crops. Beneath the shade of the date palms where drainage is good, especially at

Baquba, citrus trees are commonly planted. In the Baghdad and Karbala districts, plum, apricot, peach, and apple trees grow beneath the palms, while in the Basra district vines and pomegranates flourish. Vegetables and alfalfa are planted in palm gardens, but usually only in clearings where the palms are young and do not shade the ground.

The root (*irq*) serves as fodder. The trunk (*jid*) may be cut up for fuel or hollowed out and used for water pipes and drains. Revetments, bridges, ladders, and steps are also made from the base of the trunk.

A gum, which is occasionally exuded from the palm trunk, is used medicinally in the Punjab.

The heart or growing-point (*jummar*) is edible when fresh or cooked.

The sap yields a sweet liquor, like coconut milk, which ferments rapidly. It is drunk, both fresh and fermented, in North Africa, to some extent in India, and not at all in Iraq. The sap of an allied species of palm, *Phoenix sylvestris* Roxb., is used on a large scale in India for sugar making.

Fronds (*saaf*) provide fuel, thatch, fencing, and bridging materials.

Frond bases (*karab*) are used for fuel, for packing boats, as floats for fishing nets or for boys learning to swim, and (in Egypt), when split, for brooms.

Frond midribs (*jarid*) are used as walking sticks, as imitation spears in horseback games, as fish trays, and as roofing rafters. When they are fastened tightly together, they form a sort of paneling, which is used for floors, walls, and roofs of houses. They are also made into bird-cages, chicken coops, bedsteads, cradles, crates, boats, and fans.

From the fiber (*lif*), rope and matting are made; and with it pack saddles and couches are stuffed. It is used as a coffee strainer and as plugs for irrigation pipes.

Spines (*sauk* or *sulla*) are used occasionally as pins, as needles for extracting thorns, and as forks for eating dates.

The leaflets (*kus*) are woven into matting, from which baskets, mats, fans, and belting are made.

From the spathes (*dik* or *tal*) a perfume called "tara water" (*malaqah*) is distilled.

The fruit bunches, from which the dates have been picked, are used as brooms and as fuel, or are made into twine and rope.

The fruit is a staple food for man and beast. It can be eaten fresh, cured, or cooked. From it sugar, syrup, spirit, and vinegar are prepared.

The stones are used as cattle food, and as an adulterant for coffee, cocoa, and chocolate. They make good fuel, excellent charcoal, and are used, although not in Iraq, as necklaces.

Export.—Dates exported to Europe and America are packed in wooden cases holding seventy pounds; but those exported to India, Arabia, and East Africa, and those for local consumption are packed in baskets (*kisaf*) of matting, woven from the dried leaflets of the date palm.

Export fluctuates between 115,000 and 175,000 long tons, with an average of about 150,000, of which about two-thirds come from the Shatt al Arab district. The remainder, all of the *Zahdi* variety, come from up country, chiefly from the middle Euphrates and Baghdad areas.

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SHEIKH FALIH AS SAIHUD, PARAMOUNT SHEIKH OF THE
AL BU MUHAMMAD TRIBE



Fig. 1. Brick guest-house



Fig. 2. Sheikh Falih and his tribesmen

SHEIKH FALIH AS SAIHUD'S CAMP

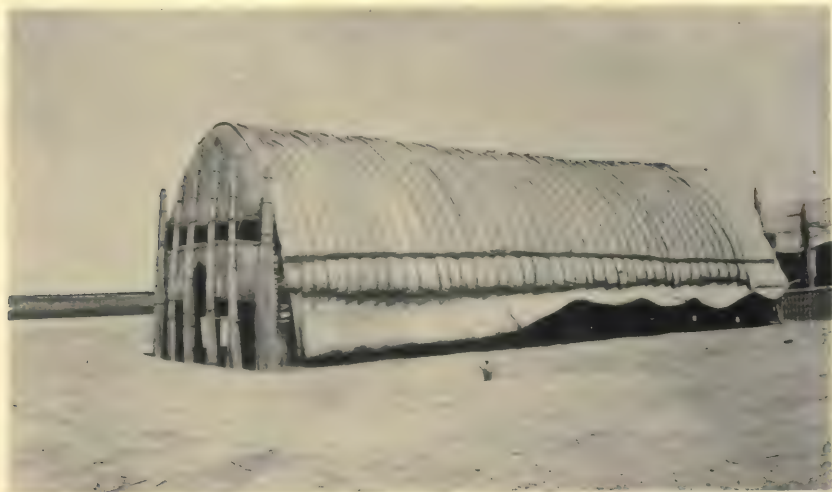


Fig. 1. Spearing fish



Fig. 2. A large boat

SHEIKH FALIH AS SAIHUD'S CAMP



SHEIKH KHAZAL IBN FALIH'S GUEST HUT, CONSTRUCTED
OF 150 REED MATS

A 8432



INTERIOR OF SHEIKH KHAZAL IBN FALIH'S GUEST HUT



FRAMEWORK OF A REED HUT



Fig. 1. Household furniture



Fig. 2. Raised bed

DEMOLITION OF HOUSE AT SHEIKH KHAZAL IBN FALIH'S CAMP

1184162



Fig. 1. Interior of council house



Fig. 2. Sheikh Falih as Saihud entering boat

BEIDHA



Fig. 1. Village



Fig. 2. Fence to keep buffaloes from rubbing against council house



VIEWS OF BEIDHA



VIEWS OF BEIDHA



Fig. 1. Interior of council house



Fig. 2. Sheikh Falih as Saihud entering boat

BEIDHA

1184143



Fig. 1. Village



Fig. 2. Pits to keep buffaloes from rubbing against council house

BEIDHA

1184144



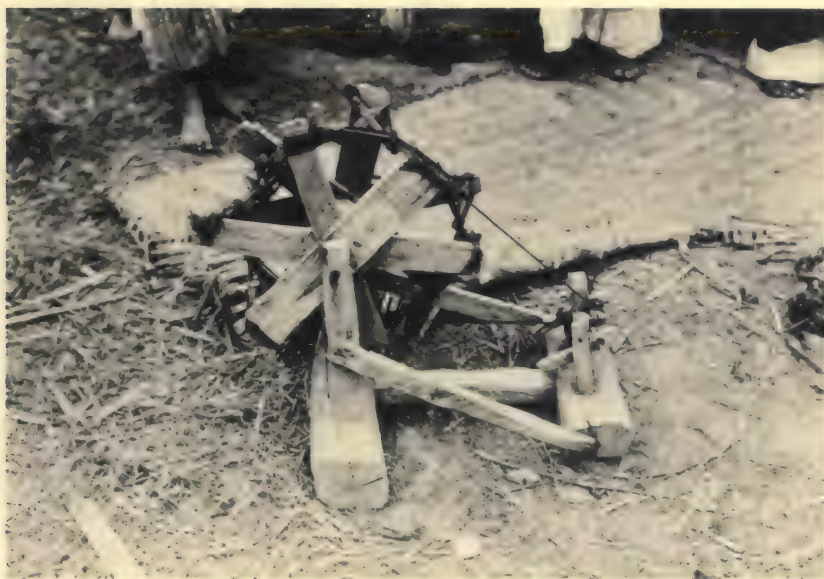
WEAVING AT SHEIKH FALIH AS SAIHUD'S CAMP

Album 135
Neg. No. 104376 (all)



A 31040

Fig. 1. Weaver smoking pipe



A 31041

Fig. 2. Spinning wheel

SHEIKH FALIH AS SAIHUD'S CAMP



Fig. 1. Shuwair, once Mandeian, with astrological name of Zahrun bar Sharhat; now Moslem, poet, professional mourner, and eccentric affecting female dress



Fig. 2. Man with hoop and whorl

A 84637



Fig. 1. Women with whorls at Sheikh Khazal
ibn Falih's camp

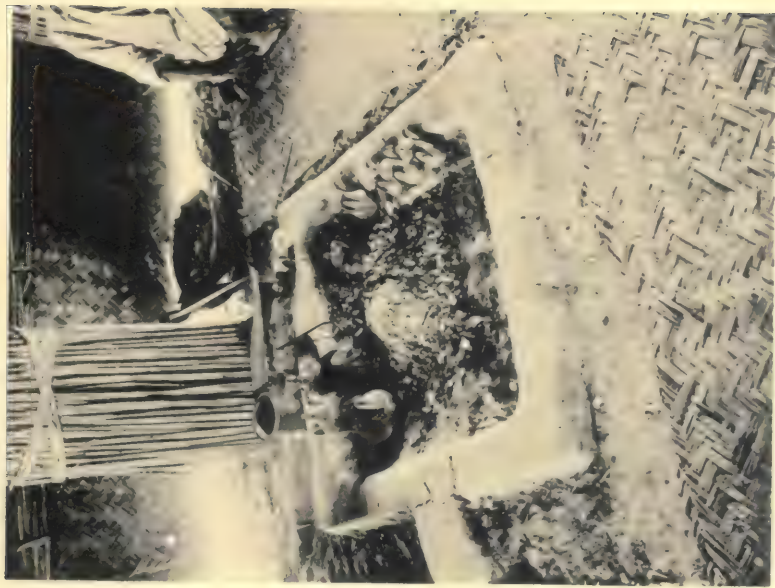


Fig. 2. Fireplace and coffee pots at Beidha



RICE BINS AT SHEIKH KHAZAL IBN FALIH'S CAMP

A 88329



Fig. 1. Milling rice in a quern



Fig. 2. Making butter in a swinging, goatskin churn

AL BU MUHAMMAD TRIBESWOMEN



POUNDING GRAIN AT SHEIKH KHAZAL IBN FALIH'S CAMP

A841102



Fig. 1. Making bread by slapping uncooked flour against oven wall; dough basin in foreground



Fig. 2. Baking bread

AL BU MUHAMMAD CAMP



Fig. 1. Plough



Fig. 2. Woman potter making a clay oven

AL BU MUHAMMAD CAMP



Fig. 1. Man making a reed mat



Fig. 2. Woman churning butter

AL BU MUHAMMAD CAMP



Fig. 1. Cattle pen next to house



Fig. 2. Buffaloes in a wallow

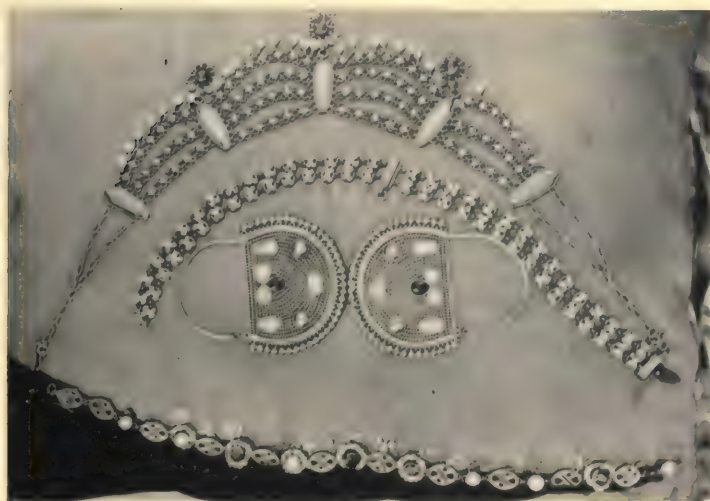
SHEIKH KHAZAL IBN FALIH'S CAMP



MILKING SHEEP AND CATTLE AT CAMP OF
SHEIKH KHAZAL IBN FALIH



SHEIKH KHAZAL IBN FALIḤ AND HIS DAUGHTER



JEWELRY OF AN AL BU MUHAMMAD WOMAN



Fig. 1. Irrigation by the *arawi* method



Fig. 2. Smoking a water pipe of a type common in the marshes

AL BU MUHAMMAD CAMP



Fig. 1. Woman eating a rush



Fig. 2. Bundle of rushes

AL BU MUHAMMAD CAMP



Fig. 1. Relaxation after *Ashura*. Singing to snapping of fingers and drumming of feet



Fig. 2. Breast-beating for the dead. Professional mourner leaping in air

AL BU MUHAMMAD CAMP



Fig. 1. A tortoise duel



Fig. 2. The death grip

AL BU MUHAMMAD CAMP



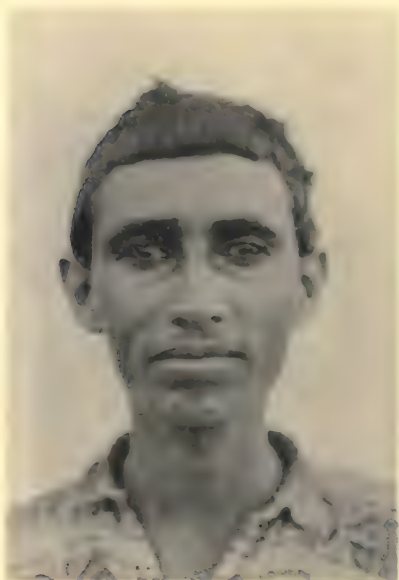
Fig. 1. Large white pelican (*Pelecanus crispus*)



Fig. 2. Young wild boar

AL BU MUHAMMAD CAMP

al#139E



No. 881 (age 20)



No. 851 (age 20)

AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

al#139E

al#139E



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No. 816 (age 25)

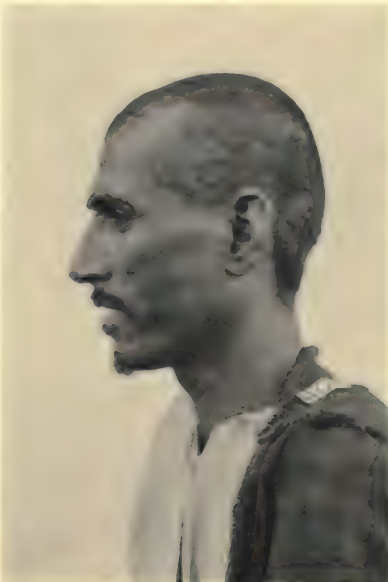
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al#139E

al#1392



No. 768 (age 25)



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AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

al#1392

al#139E



No. 771 (age 30)



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AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

al#139E

Q#139E



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No. 902 (age 33)

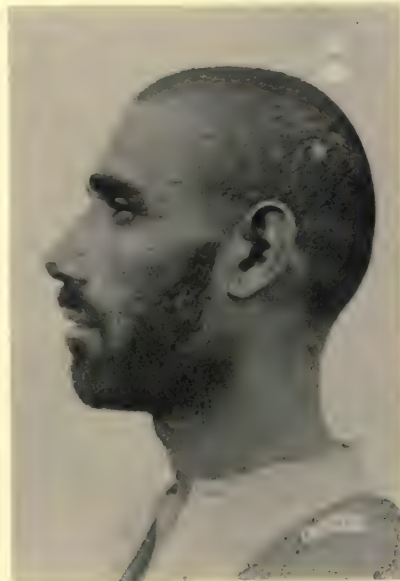
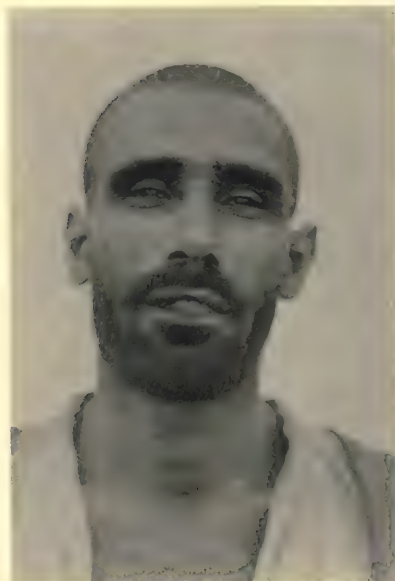
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Q#139E

alt #139 E



No. 897 (age 33)



No. 835 (age 35)

AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

alt #139 E

al#139E

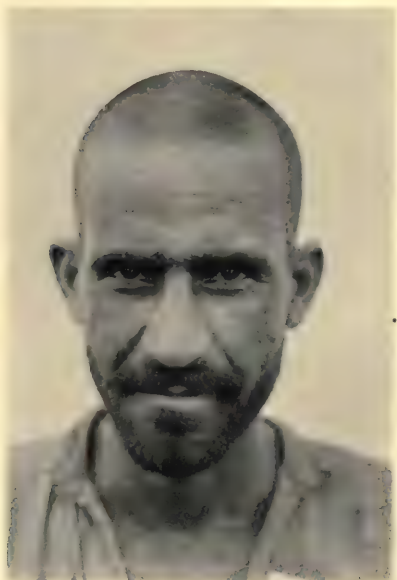


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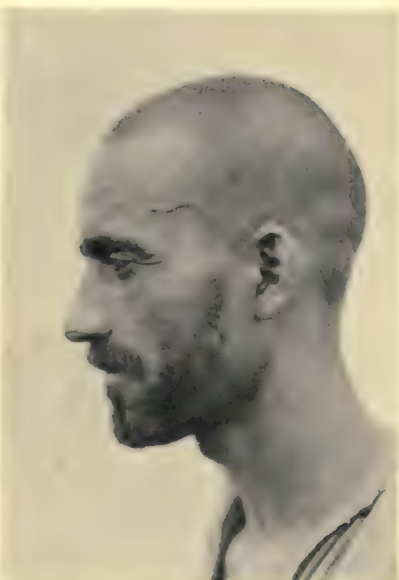


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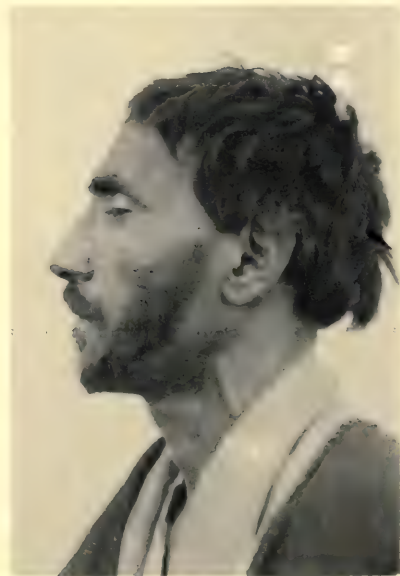
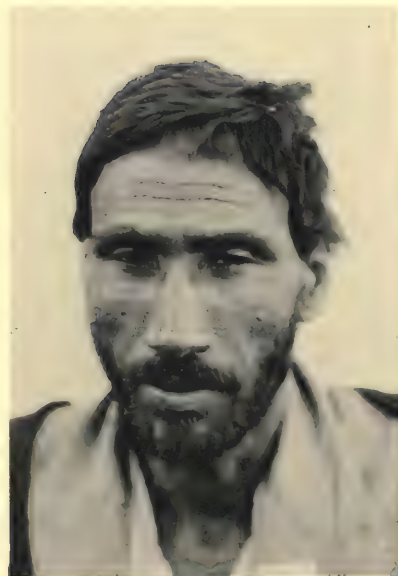
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al#139E



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AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

al#139E

al#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 87



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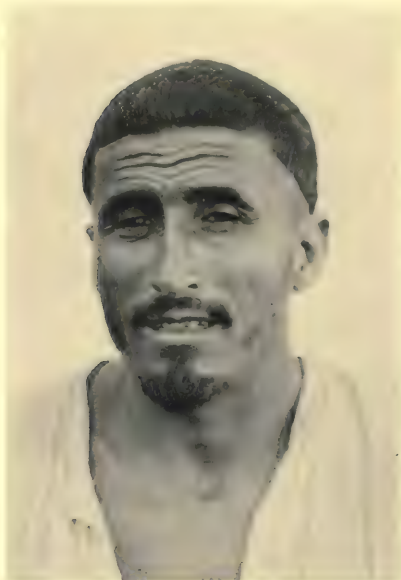


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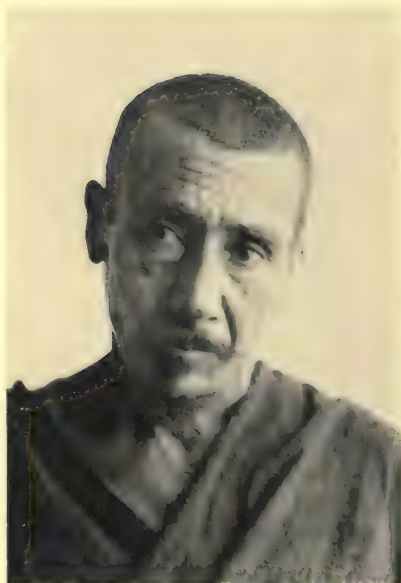
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al#139E

alt #139 E (alt)



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No. 916 (age 40)

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alt#139E (all)



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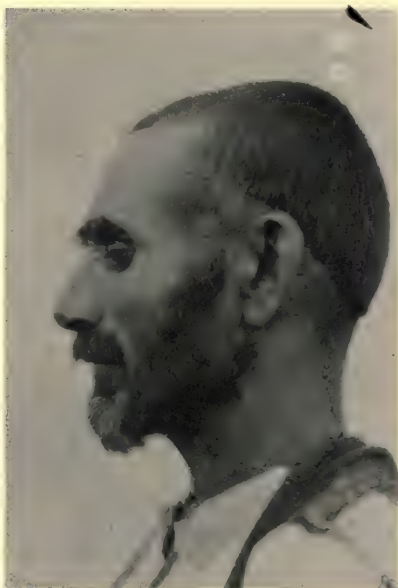
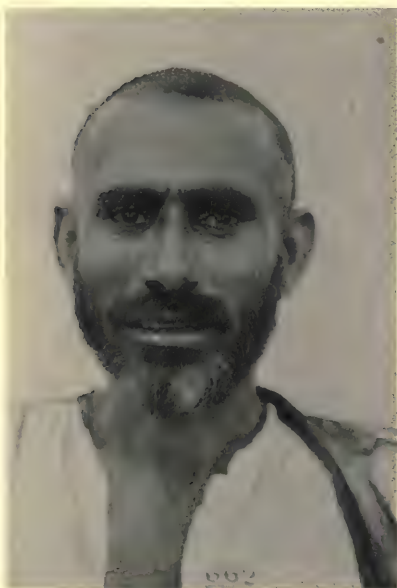
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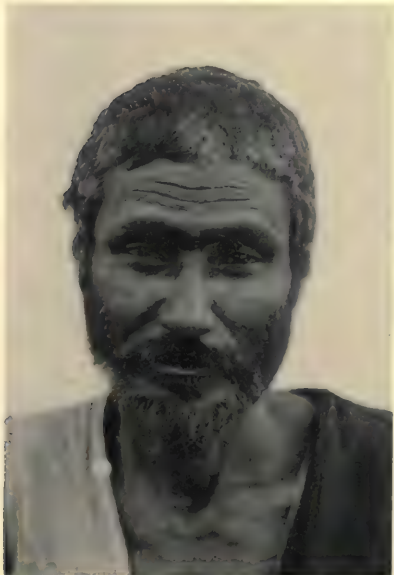
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AL BU MUHAMMAD CLASSIC MEDITERRANEAN TYPES

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Wey. H
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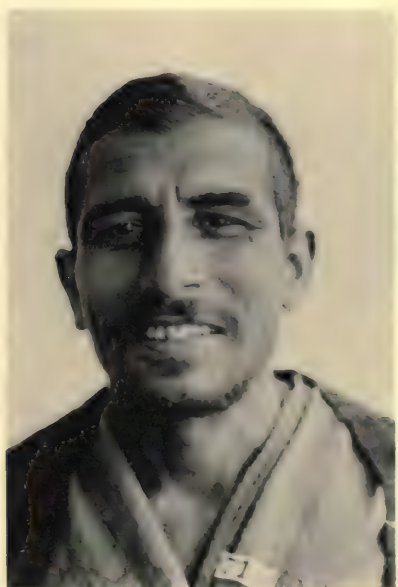
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PLUS CONVEX-NOSED TYPES

alt#139E (all)



No. 770 (age 35)



No. 924 (age 40)

AL BU MUHAMMAD CLASSIC MEDITERRANEAN
PLUS CONVEX-NOSED TYPES

ac#139E (all)



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alt# 139E (all)



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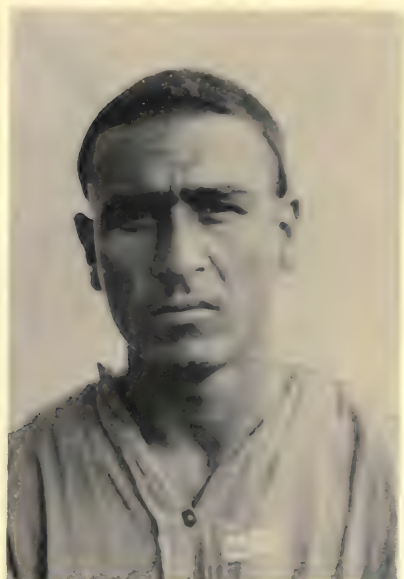
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PLUS CONVEX-NOSED TYPE

alt #139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 97



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No. 898 (age 23)

AL BU MUHAMMAD ATLANTO-MEDITERRANEAN TYPES

alt #139 E (all)



No. 786 (age 25)



No. 787 (age 25)

AL BU MUHAMMAD ATLANTO-MEDITERRANEAN TYPES

alt #139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 99



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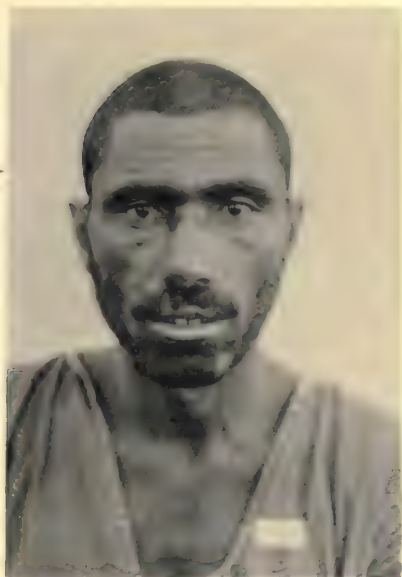


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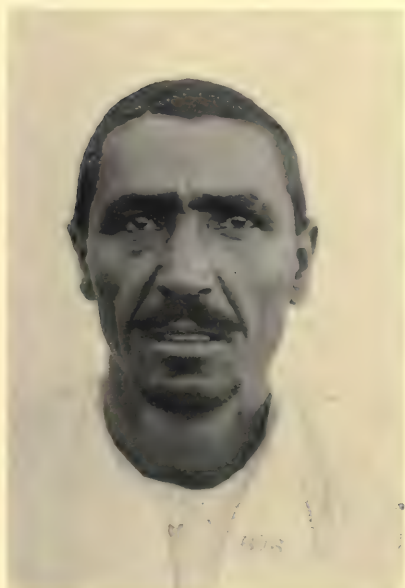
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ac#139E (all)



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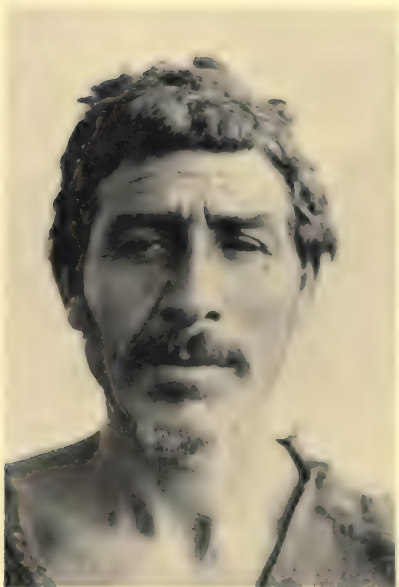
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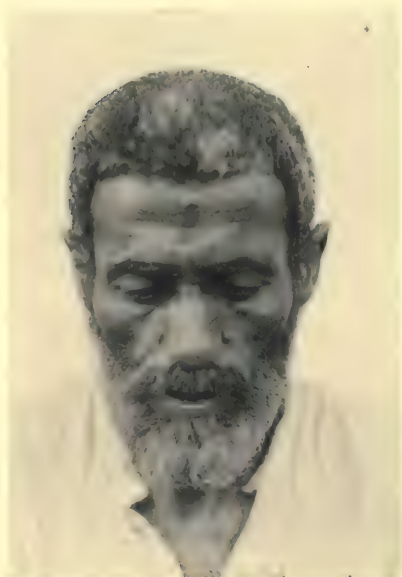


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PLUS CONVEX-NOSED TYPES

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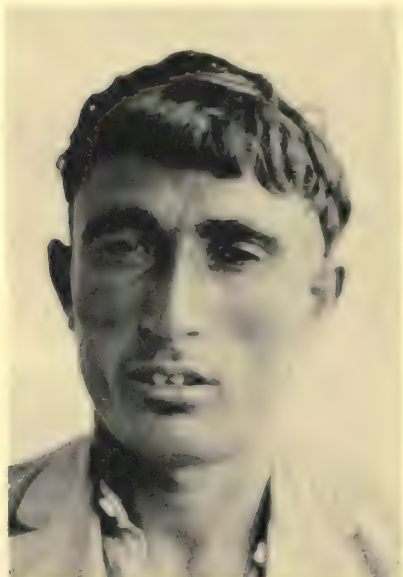


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PLUS CONVEX-NOSED TYPES

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PLUS CONVEX-NOSED TYPES

all #1392 (all)



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PLUS CONVEX-NOSED TYPES

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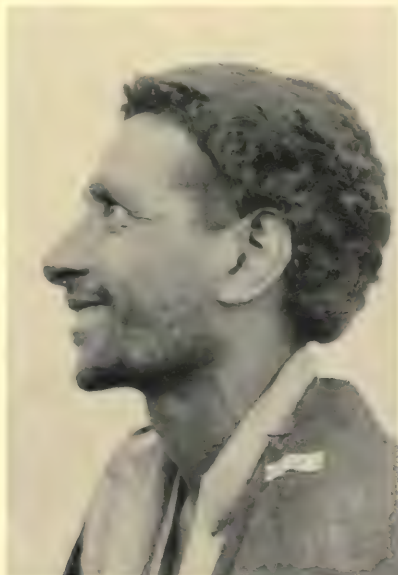
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PLUS CONVEX-NOSED TYPES

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Field Museum of Natural History

Anthropology, Vol. 30, Plate 112



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No. 769 (age 35)

AL BU MUHAMMAD ATLANTO-MEDITERRANEAN
PLUS CONVEX-NOSED TYPES

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Field Museum of Natural History

Anthropology, Vol. 30, Plate 113



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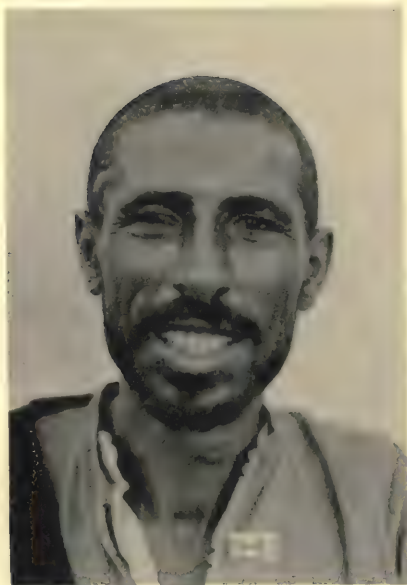
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PLUS CONVEX-NOSED TYPES

alt # 139 E (all)



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No. 847 (age 45)

AL BU MUHAMMAD ATLANTO-MEDITERRANEAN
PLUS CONVEX-NOSED TYPES

alt# 139 E (all)



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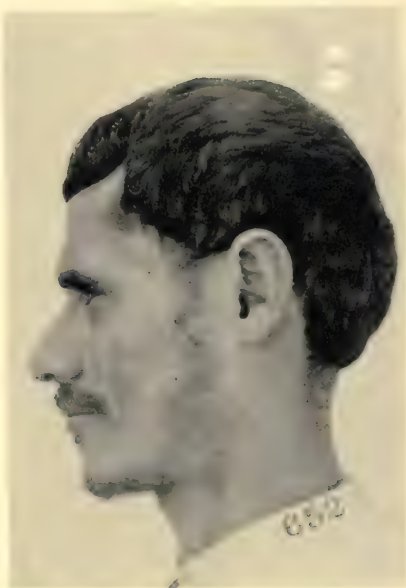
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 116



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AL BU MUHAMMAD MESOCEPHALS

al#139 E (all)



No. 891 (age 40)



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AL BU MUHAMMAD MESOCEPHALS

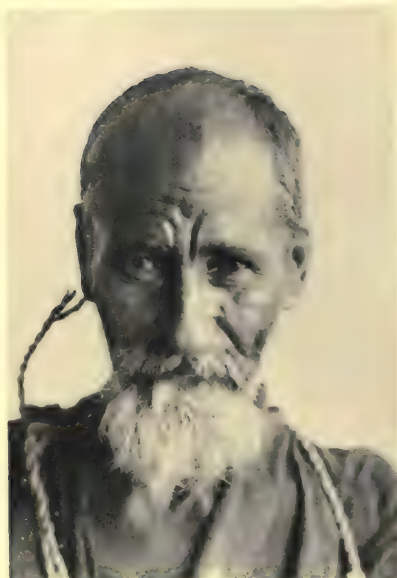
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 118



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AL BU MUHAMMAD MESOCEPHALS

alt# 139 E (all)



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AL BU MUHAMMAD SUB-BRACHYCEPHALIC OR
BRACHYCEPHALIC MEDITERRANEAN TYPES

alt #139 E (all)



No. 766 (age 30)



No. 928 (age 30)

AL BU MUHAMMAD SUB-BRACHYCEPHALIC OR
BRACHYCEPHALIC MEDITERRANEAN TYPES

alt#139 E (all)



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BRACHYCEPHALIC MEDITERRANEAN TYPES

al #139 E (all)



No. 777 (age 40)



No. 931 (age 40)

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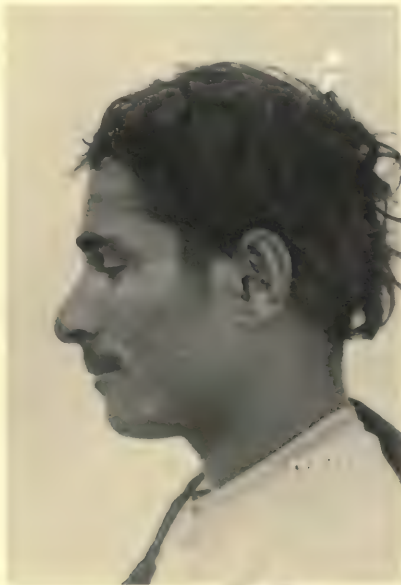
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aQ#B9E(ale)



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AL BU MUHAMMAD ARMENOID BRACHYCEPHALS

al#139E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 125



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AL BU MUHAMMAD ARMENOID BRACHYCEPHALS

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AL BU MUHAMMAD ARMENOID BRACHYCEPHALS

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Field Museum of Natural History

Anthropology, Vol. 30, Plate 127



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alt #139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 128



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AL BU MUHAMMAD ARMENOID BRACHYCEPHALS

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Field Museum of Natural History

Anthropology, Vol. 30, Plate 129



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AL BU MUHAMMAD MISCELLANEOUS BRACHYCEPHALS

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Field Museum of Natural History

Anthropology, Vol. 30, Plate 131



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AL BU MUHAMMAD MISCELLANEOUS BRACHYCEPHALS

alt # 139 E (alt)



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AL BU MUHAMMAD NEGROID TYPES

alt# 139 E (a 00)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 135



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AL BU MUHAMMAD NEGROID TYPES

60#1392 (all)



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AL BU MUHAMMAD NEGROID TYPES

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Anthropology, Vol. 30, Plate 137

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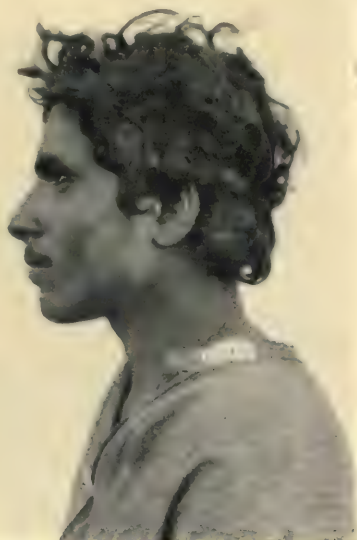
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 138



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AL BU MUHAMMAD AUSTRALOID TYPES

al # 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 139

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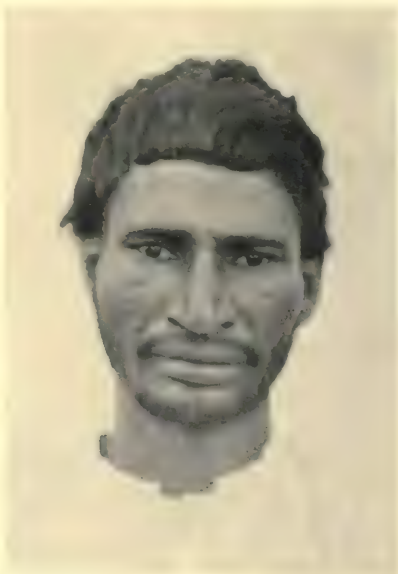
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 140



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No. 822 (age 65)

AL BU MUHAMMAD ABERRANT TYPES

184179



BOATS AT HALFAYA



BOAT-BUILDING AT HALFAYA



Fig. 1. Heating tar for boats



Fig. 2. Tarring the skin used to cover the framework of the boat

BOAT-BUILDING AT HALFAYA



BOAT-BUILDING AT HALFAYA

A 84108



Fig. 1. Primitive type of craft, made of reed bundles



Fig. 2. A hunting expedition

AL BU MUHAMMAD BOATS

A84165



Fig. 1. Boats at Sheikh Khazal's camp



Fig. 2. Lighters on the Shatt al Arab

AL BU MUHAMMAD BOATS

1184159



LARGE BOAT AT AL QURNA, JUNCTION OF TIGRIS AND
EUPHRATES RIVERS

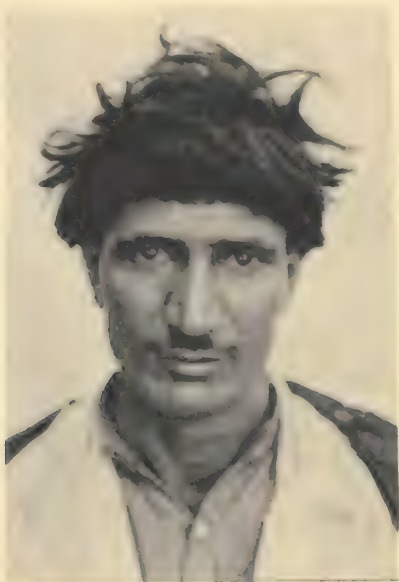
A84104



SUBBI IRON-WORKER NEAR SHEIKH KHAZAL IBN FALIH'S CAMP

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No. 983 (age 20)



No. 995 (age 25)

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AL SAWAAD CLASSIC MEDITERRANEANS WITH EITHER
STRAIGHT OR CONVEX NOSES

al#139 E (all)



No. 984 (age 35)



No. 981 (age 35)

AL SAWAAD CLASSIC MEDITERRANEANS WITH EITHER
STRAIGHT OR CONVEX NOSES

alt #139E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 151

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No. 992 (age 35)

Nag #
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STRAIGHT OR CONVEX NOSES

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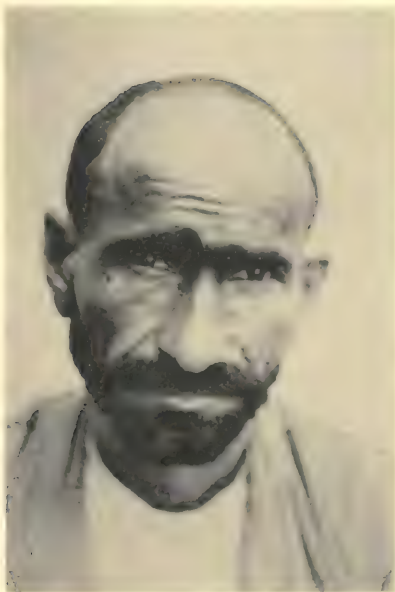
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 152



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AL SAWAAD CLASSIC MEDITERRANEANS WITH EITHER
STRAIGHT OR CONVEX NOSES

al # 139 E (all)

Field Museum of Natural History

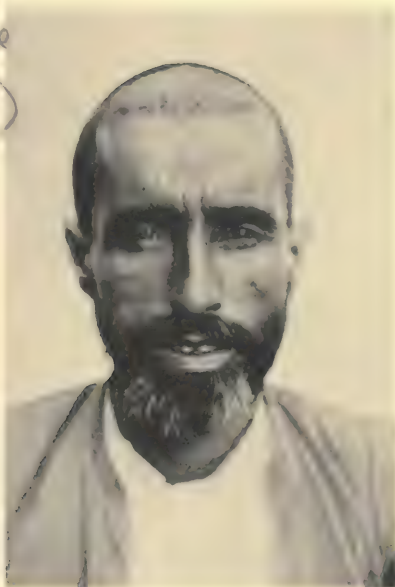
Anthropology, Vol. 30, Plate 153

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83219
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No. 956 (age 45)

Neg. No.
83237
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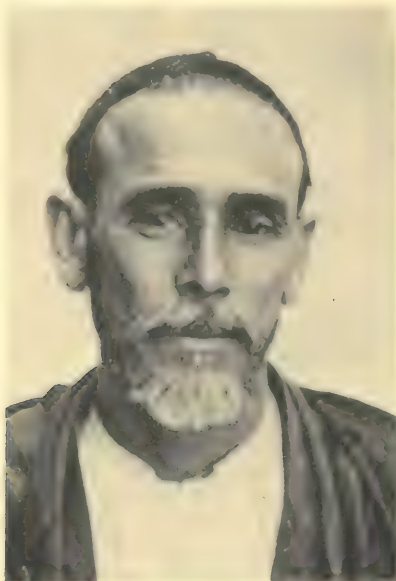
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AL SAWAAD CLASSIC MEDITERRANEANS WITH EITHER
STRAIGHT OR CONVEX NOSES

cat # 139E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 154



No. 968 (age 45)



No. 969 (age 45)

AL SAWAAD CLASSIC MEDITERRANEANS WITH EITHER
STRAIGHT OR CONVEX NOSES

alt# 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 155

No.
83238
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Neg. No.
83237
(3x4)

No. 966 (age 20)

No.
83293
(4)



Neg. No.
83294
(3x4)

No. 999 (age 20)

AL SAWAAD ATLANTO-MEDITERRANEANS

alt#139E(alt)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 156



No. 954 (age 22)



No. 986 (age 23)

AL SAWAAD ATLANTO-MEDITERRANEANS

Neg. #
83230
(344)

alt # 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 157

Neg. #
83231
(344)



No. 962 (age 25)

Neg. #
83237
(344)

Neg. #
83238
(344)



No. 979 (age 25)

AL SAWAAD ATLANTO-MEDITERRANEANS

226
314)
a#1398 (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 158



No. 960 (age 25)



No. 1003 (age 30)

AL SAWAAD ATLANTO-MEDITERRANEANS

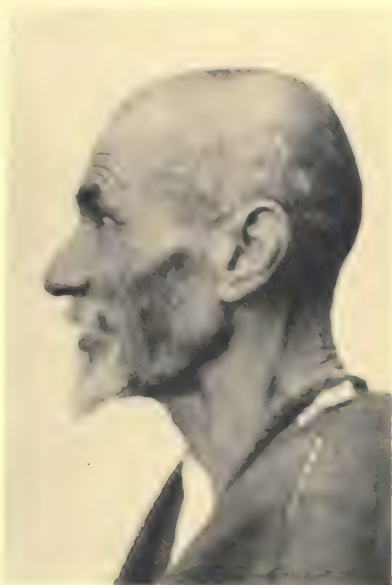
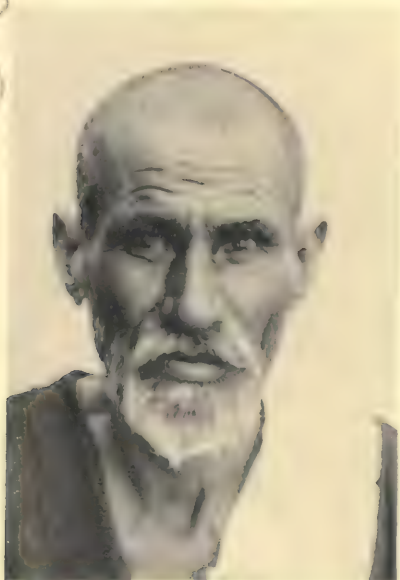
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alt # 139 E (all)

Field Museum of Natural History

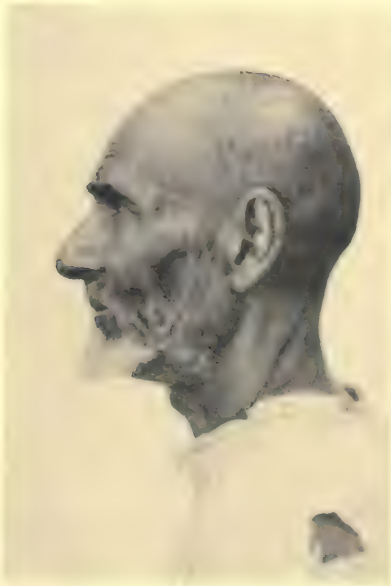
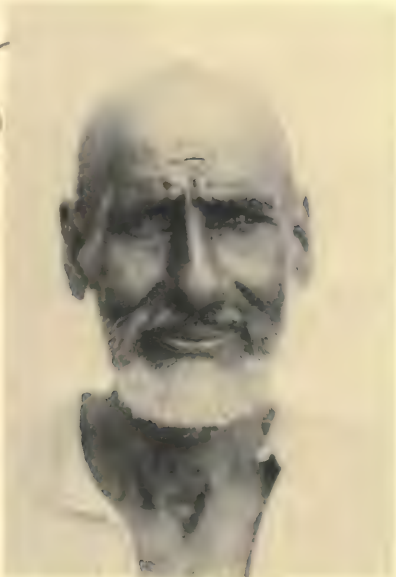
Anthropology, Vol. 30, Plate 159

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No. 957 (age 55)

8. #
272
(4)



Neg. 7
8327
(3x4)

No. 988 (age 60)

AL SAWAAD ATLANTO-MEDITERRANEANS

alt#139 E(alt)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 160



No. 959 (age 20)



No. 976 (age 20)

AL SAWAAD BRACHYCEPHALS

alt # 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 161



No. 1001 (age 20)



No. 972 (age 22)

AL SAWAAD BRACHYCEPHALS

8. #
222
(34)

ac # 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 162

116
(31)



No. 963 (age 22)

8. #
222
(34)



No. 6
53

No. 958 (age 25)

AL SAWAAD BRACHYCEPHALS

al#139 E Call

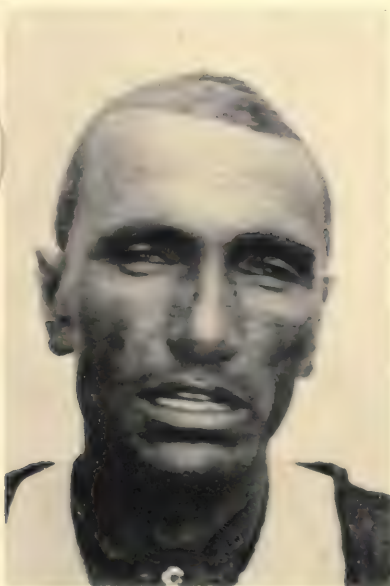
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Anthropology, Vol. 30, Plate 163

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(34)



No. 982 (age 30)



Neg. #
8329
(34)

No. 997 (age 35)

AL SAWAAD BRACHYCEPHALS

neg. # 816 (3x4)

al # 1392 (all)

Neg. # 832 (3x4)



No. 955 (age 40)

neg. # 837 (3x4)

Neg. # 832



No. 996 (age 45)

AL SAWAAD BRACHYCEPHALS

al# 139E (a00)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 165



No. 1002 (age 25)



No. 985 (age 45)

AL SAWAAD SUB-BRACHYCEPHALIC ARMENOIDS

ad # 139 E (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 166



No. 961 (age 20)



No. 977 (age 25)

AL SAWAAD SUB-BRACHYCEPHALIC ARMENOIDS

184284



Fig. 1. Subba Sheikhs



Fig. 2. Subbi smith working on golden coffee set
made for King Ghazi's coronation

AMARA

184302

124285

124287



SUBBA SHEIKHS AT AMARA

alt#1392 (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 169

Neg. #
82743
(307)



No. 2934 (age 25)



Neg. #
82725
(307)

No. 2924 (age 30)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

all # 1392 (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 170



No. 2939 (age 30)



No. 2926 (age 30)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

alt # 139 E

Field Museum of Natural History

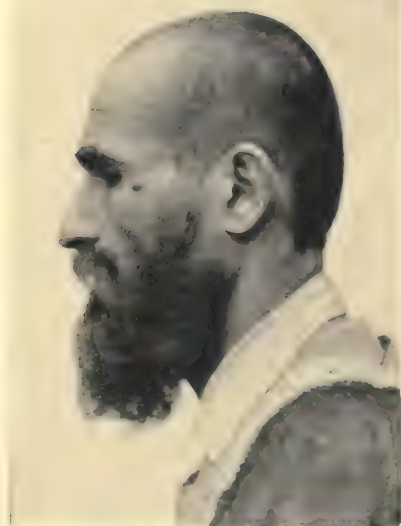
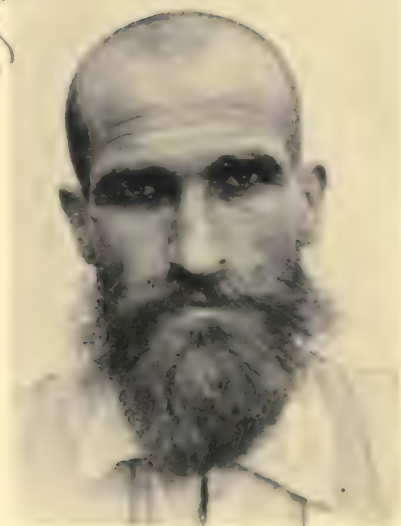
Anthropology, Vol. 30, Plate 171

Reg #
83749
(34)



No. 2937 (age 37)

Reg #
83199
(34)



No. 2919 (age 38)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

alt # 1392



No. 2957 (age 40)



No. 2954 (age 51)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

al# 139E

Field Museum of Natural History

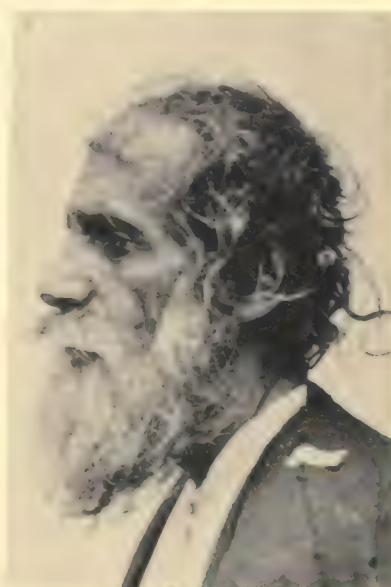
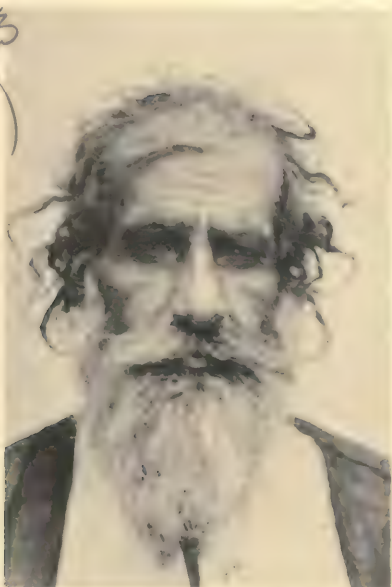
Anthropology, Vol. 30, Plate 173

Wg #
13469
(314)



No. 2952 (age 55)

No. #
82734
(314)



No. 2931 (age 55)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

2484

alt #139 E



No. 2888 (age 60)

SUBBI AT AMARA

al#139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 175

Neg #
82 485
(34)



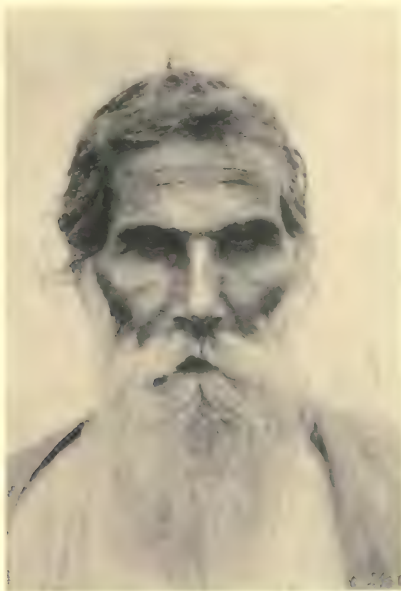
No. 2888 (age 60)

SUBBI AT AMARA

alt #1392

Field Museum of Natural History

Anthropology, Vol. 30, Plate 176



No. 2917 (age 65)



No. 2948 (age 70)

SUBBA IRANIAN PLATEAU DOLICHOCEPHALS

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 177



No. 2929 (age 22)



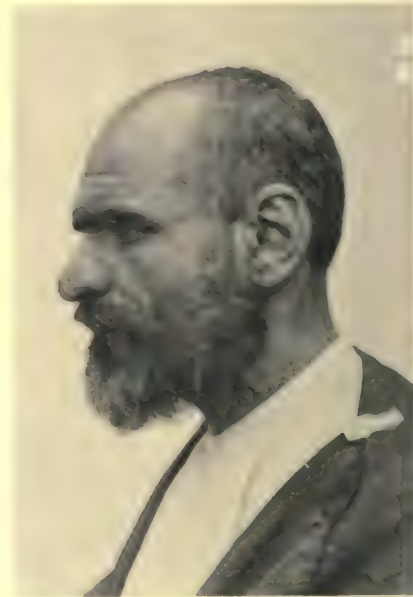
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SUBBA IRANIAN PLATEAU LOW MESOCEPHALS

alt #139E



No. 2909 (age 34)



No. 2960 (age 45)

SUBBA IRANIAN PLATEAU LOW MESOCEPHALS

al #139 E

Neg #
8248

Field Museum of Natural History

Anthropology, Vol. 30, Plate 179



No. 2890 (age 47)



No. 2891 (age 34)

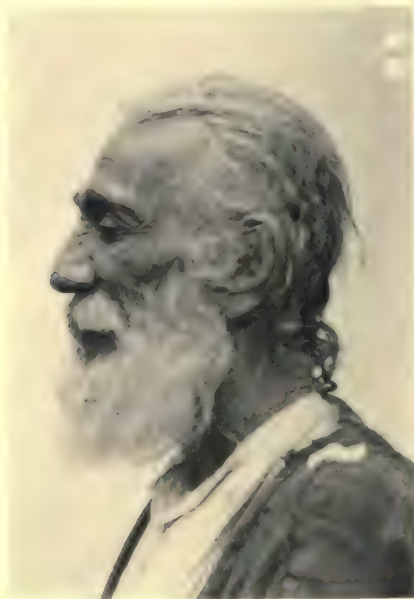
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(3+4)

SUBBA IRANIAN PLATEAU LOW MESOCEPHALS

alt #139 E



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No. 2922 (age 60)

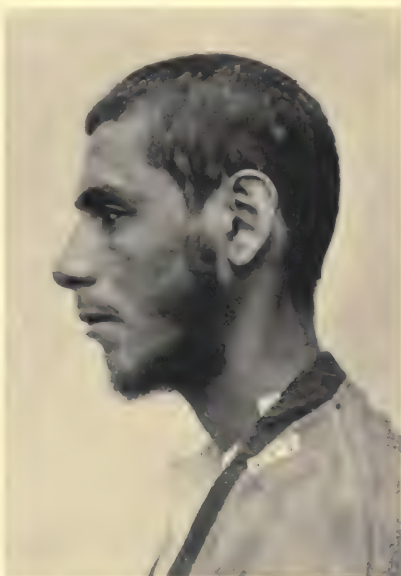
SUBBA IRANIAN PLATEAU LOW MESOCEPHALS

20#139E

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(34)

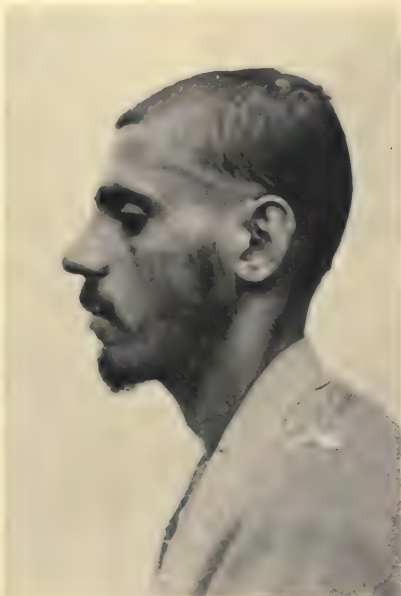
Field Museum of Natural History

Anthropology, Vol. 30, Plate 181



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(34)



No. 2955 (age 20)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

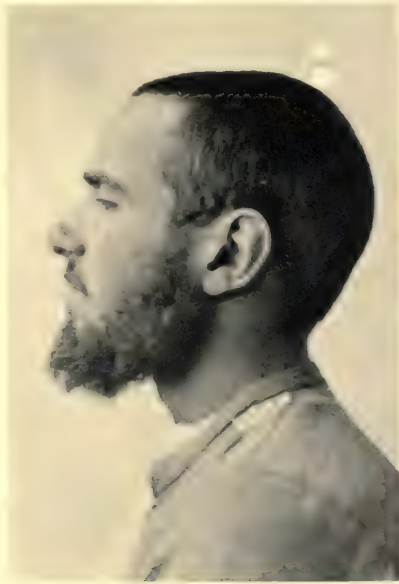
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Field Museum of Natural History

Anthropology, Vol. 30, Plate 182



No. 2965 (age 24)



No. 2963 (age 25)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

Neg #
83148
(3x4)

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 183

Neg #
83149
3x4



No. 2942 (age 25)

Neg #
83160
(3x4)



Neg #
83161
(3x4)

No. 2947 (age 26)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

alt#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 184



No. 2969 (age 29)



No. 2910 (age 30)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

alt # 1398



No. 2896 (age 35)



No. 2893 (age 42)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

Neg. #
82505
(3+4)

Neg
82495
(3+4)

alt #
2504
(3+4)

2494
(3+4)

2512
(341)

alt #139E

Nee
82
(3)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 186



No. 2970 (age 50)

2513
(341)

Nee
82
(34)



No. 2930 (age 50)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 187

Neg # 2525
(324)



No. 2973 (age 54)



No. 2921 (age 56)

Neg # 2530
(324)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

8 #
2718
544)

alt# 139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 188



No. 2920 (age 50)

SUBBI IRANIAN PLATEAU HIGH MESOCEPHAL

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 189

Neg #
82719



No. 2920 (age 50)

SUBBI IRANIAN PLATEAU HIGH MESOCEPHAL

No.
2532
(3x4)

alt #1392



No. 2976 (age 68)

0576
(3x4)



No. 2974 (age 71)

N
82
(3)

SUBBA IRANIAN PLATEAU HIGH MESOCEPHALS

alt# 139E

Field Museum of Natural History

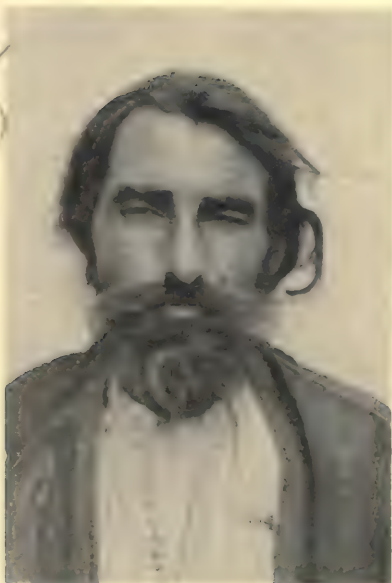
Anthropology, Vol. 30, Plate 191

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83151
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Neg #
83153
(344)



No. 2944 (age 30)

SUBBA IRANIAN PLATEAU SUB-BRACHYCEPHALS

Q#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 192



No. 2903 (age 33)



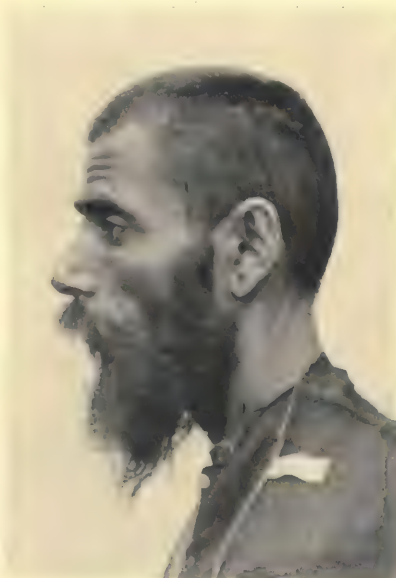
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SUBBA IRANIAN PLATEAU SUB-BRACHYCEPHALS

Q# 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 193



No. 2925 (age 39)



No. 2945 (age 50)

SUBBA IRANIAN PLATEAU SUB-BRACHYCEPHALS

alt#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 194



No. 2900 (age 55)



No. 2923 (age 70)

SUBBA IRANIAN PLATEAU SUB-BRACHYCEPHALS

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 195



No. 2975 (age 16)



No. 2971 (age 18)

SUBBA HIGH MESOCEPHALS

2530
(21)

Neg. #
2531
(314)

2531
(314)

Neg. #
2531
(314)

9 #
2704
344)

20#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 196



No. 2911 (age 20)

0
2712
344



NA
82
3

No. 2914 (age 20)

SUBBA HIGH MESOCEPHALS

8
2496
(3x1)

ac#1892

Neg #
82497
(3x1)



No. 2894 (age 20)

710
(3x4)



Neg #
82711
(3x4)

No. 2913 (age 21)

SUBBA HIGH MESOCEPHALS

al#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 198



No. 2946 (age 22)



No. 2933 (age 22)

SUBBA HIGH MESOCEPHALS

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 199

No.
698
324

Neg. #
82699
(34)



No. 2908 (age 22)

No.
2536
(324)

Neg. #
82537
(34)



No. 2901 (age 23)

SUBBA HIGH MESOCEPHALS

al#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 200



No. 2892 (age 25)



No. 2905 (age 26)

SUBBA HIGH MESOCEPHALS

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 201

Neg. #
82745
344



No. 2935 (age 28)



Neg. #
82690
344

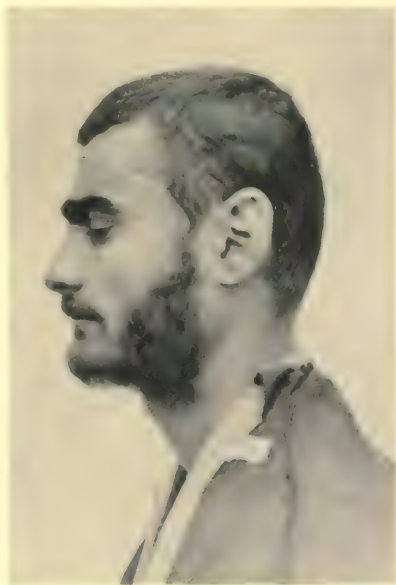
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SUBBA HIGH MESOCEPHALS

g. No.
3 Plate
3x4

ac# 139E

Mag
8
(3



No. 2951 (age 20)

754
3x4



No
82
(2

No. 2940 (age 25)

SUBBA BRACHYCEPHALS PLUS IRANIAN PLATEAU TYPE

Q#138 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 203

Neg
83179
324



No. 2918 (age 30)

Neg. #
82518
(3.4)



No. 2898 (age 32)

SUBBA BRACHYCEPHALS PLUS IRANIAN PLATEAU TYPE

al#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 204



No. 2936 (age 39)



No. 2959 (age 40)

SUBBA BRACHYCEPHALS PLUS IRANIAN PLATEAU TYPE

al#139 e

Field Museum of Natural History

Anthropology, Vol. 30, Plate 205

Neg. #

82715

344



No. 2915 (age 42)

Neg. #

87509



No. 2968 (age 55)

SUBBA BRACHYCEPHALS PLUS IRANIAN PLATEAU TYPE

2506
344

ac#139E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 206

No.
82



No. 2897 (age 19)

2906
(34)



No. 2912 (age 20)

No.
82

SUBBA JEWISH (above) AND NORTH EUROPEAN (below) TYPES

al#139E

Dec. #
82 83
3x1



No. 2972 (age 20)



Dec. #
82 86 97

No. 2907 (age 26)

SUBBA OF ABERRANT TYPES

alt # 139 e

Field Museum of Natural History

Anthropology, Vol. 30, Plate 208



No. 2899 (age 33)



No. 2966 (age 34)

SUBBA OF ABERRANT TYPES

neg. #
82683
(6+4)

al # 1392

Field Museum of Natural History

Anthropology, Vol. 30, Plate 209

Neg. #
82684
(8x4)



No. 2988 (age 12)

neg. #
82671
(8x4)



Neg. No.
82672
5x4

No. 2982 (age 15)

SUBBA WOMEN

alt #139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 210



No. 2985 (age 18)



No. 2981 (age 20)

SUBBA WOMEN

a# 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 211

No.
83205
(3+4)



No. 2999 (age 20)

Neg. No.
83318
(3+4)



No. 3002 (age 21)

SUBBA WOMEN

20#1398



No. 2984 (age 23)



No. 2983 (age 30)

SUBBA WOMEN

al#139E

Neg. No.
2687
134



No. 2987 (age 40)

Neg. #
83203
344



No. 2998 (age 40)

SUBBA WOMEN

alt #1398

No. 2979
314
Field Museum of Natural History

Anthropology, Vol. 30, Plate 214



No. 2986 (age 50)



No. 3007 (age 50)

SUBBA WOMEN

alt # 139 E

Field Museum of Natural History

Anthropology, Vol. 30, Plate 215

Neg. No.
93213
(344)



No. 3012 (age 60)



Neg. No.
83209
344

No. 3001 (age 60)

SUBBA WOMEN

Album 139-E
Neg. No. 104417 (all)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 216



SUBBA CHILDREN

Album 139-E

Neg. No. 104416 (a117)

Field Museum of Natural History

Anthropology, Vol. 30, Plate 217



SUBBA CHILDREN



LEVELING THE GROUND IN RICE FIELD



SOWING RICE

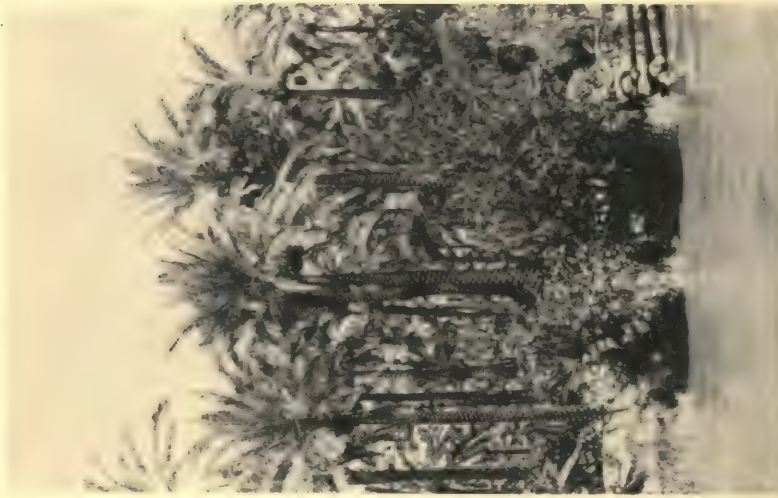


Fig. 1. Abu al Khasib Creek, which irrigates
about five thousand acres



Fig. 2. Stacking baled licorice root



Fig. 1. Digging in alfalfa between rows of palms



Fig. 2. Splitting into sprigs the staminate inflorescences of date palm

SHATT AL ARAB



Fig. 1. Carrying harvested dates



Fig. 2. Pruning frond bases of date palm



Fig. 1. Sprigs of staminate blossoms of date palm



Fig. 2. Pruning fronds of date palm

SHATT AL ARAB



Fig. 1. Spikes of unripened dates: left, with web caused by date mite; right, undamaged



Fig. 2. Spraying *da'iri* palm with nicotine



Fig. 1. General view

TOMB OF IMAM, NEAR AL QURNA

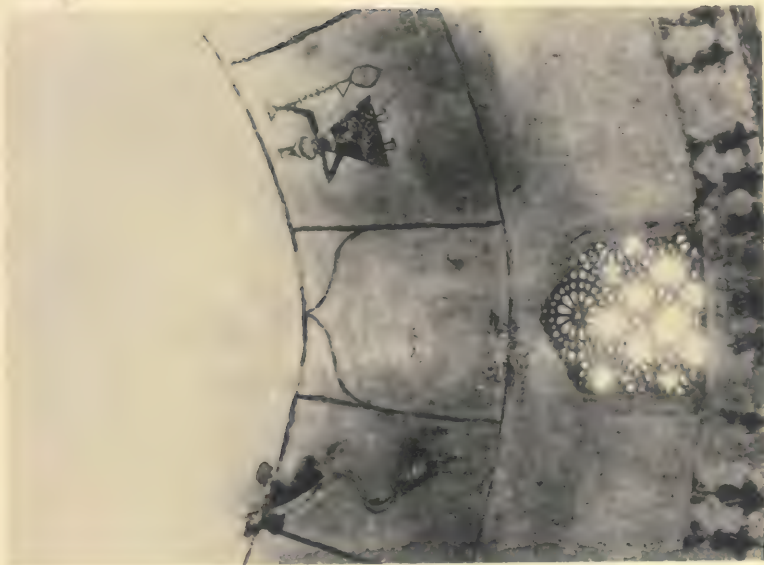


Fig. 2. Part of decorations on inside of dome

Album No. 135

Neg. No. 104418 (all)

1183943

1183943

Album No. 135
Neg. No. 104374



BRICK KILN OF ZIGGURAT TYPE NEAR AL QURNA



SAMAWA FROM THE AIR

Photograph by permission of British Royal Air force. Crown copyright reserved



STONE TROUGH, PROBABLY FROM WARKA, ORNAMENTED WITH SCENE SHOWING MADHIF TYPE OF BUILDING

